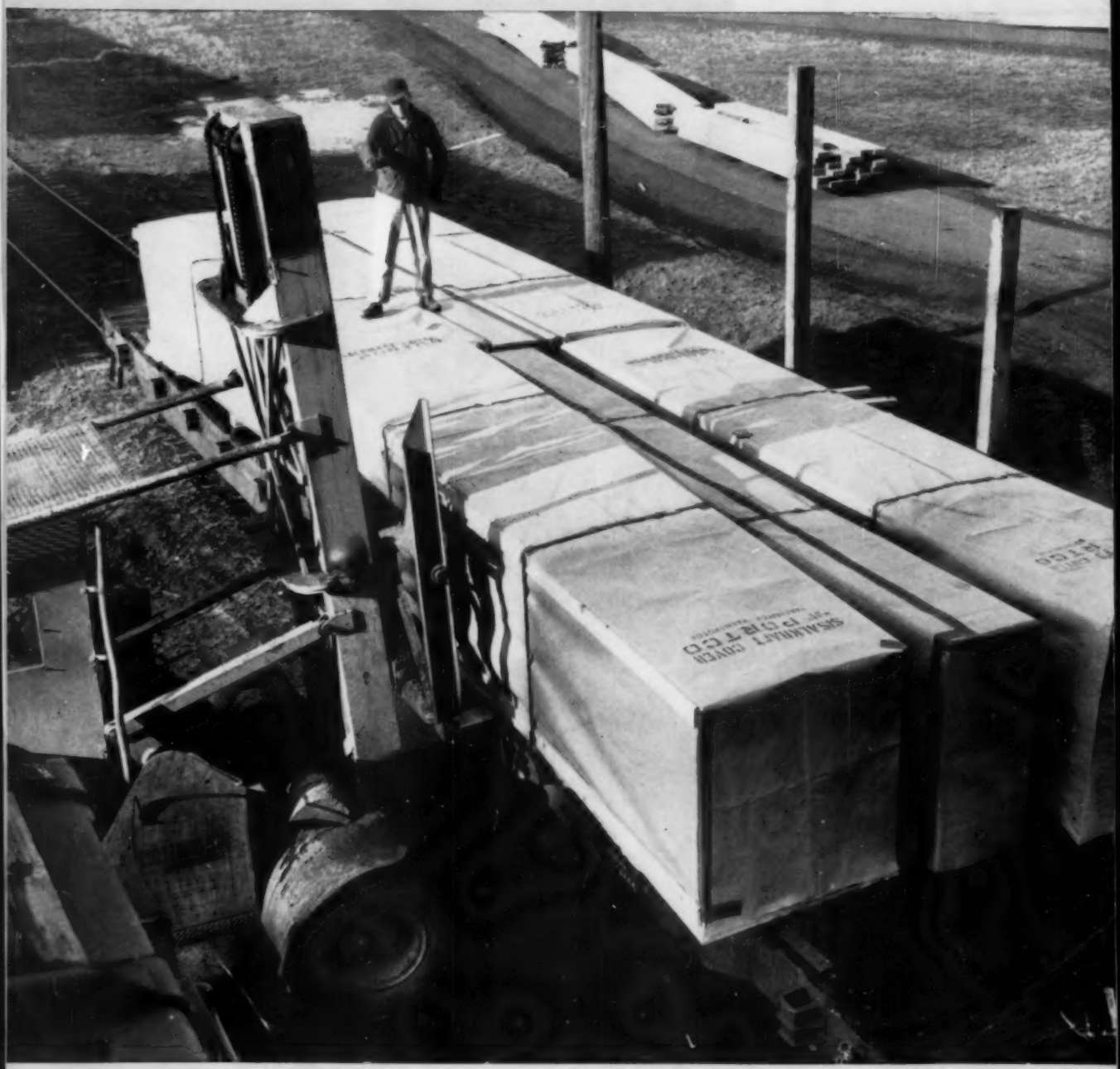
THE Lumberman

JUNE, 1956

New Process Makes Distinctive Board

Western Dry Kiln Men Stress Controls



Nation's Building Industry Demands Unitized Handling . . Page 68

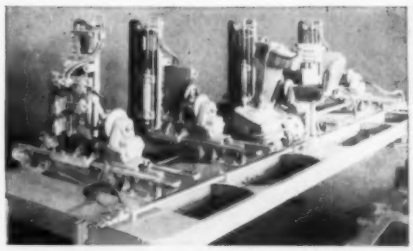
A MILLER FREEMAN PUBLICATION

50 cents

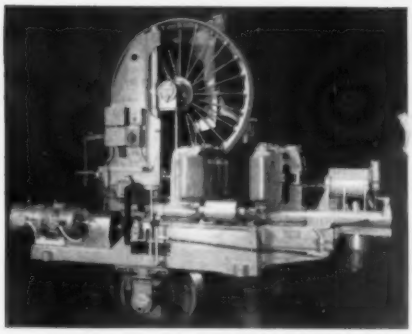
Higher Production
Lower Overhead
Greater Profits

PRESCOTT

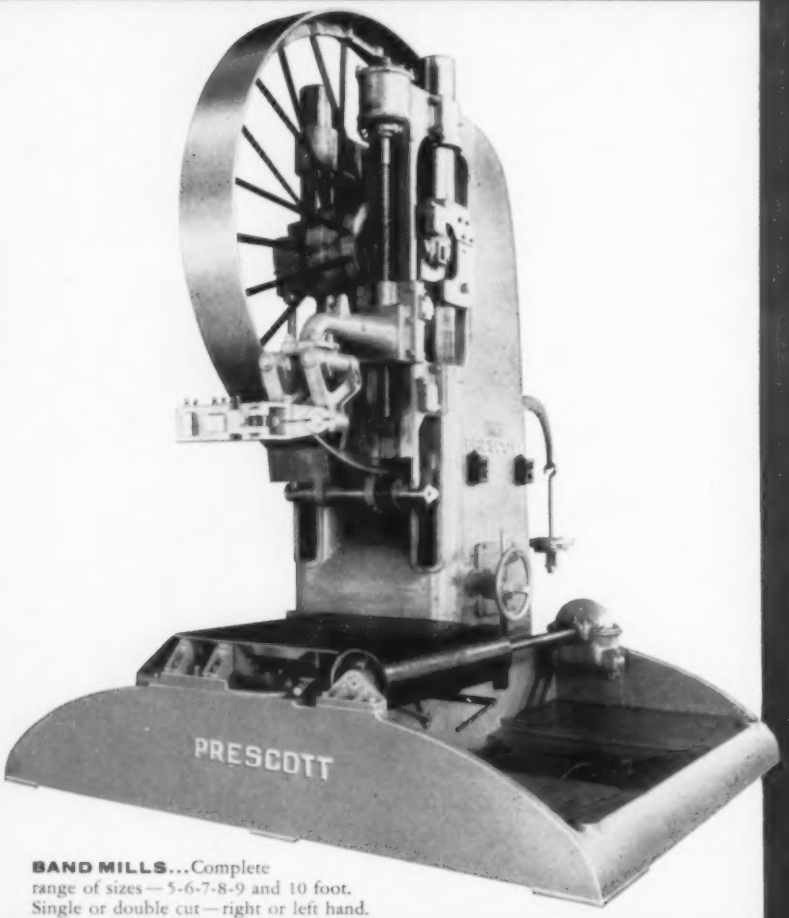
Sawmill Machinery



CARRIAGES Rack and pinion; screw block. Medium and heavy-duty. Right and left hand.



VERTICAL AND HORIZONTAL RESAWS Complete range of sizes—5-6-7 foot. Precision accuracy—minimum kerf waste.



BAND MILLS... Complete range of sizes—5-6-7-8-9 and 10 foot. Single or double cut—right or left hand.

MORE SALEABLE LUMBER PER LOG is the result of the advanced engineering, service-proved basic features, heavy-duty construction, and the operating precision of Prescott sawmill machinery. You get maximum quantity and grade from every log.

LOWER PRODUCTION COSTS are assured. Log loading and turning are stepped up. You can cut more lines per minute with less waste. Downtime is virtually eliminated and slow, costly, old fashioned methods can be scrapped immediately.

INCREASED PROFITS naturally follow when you install Prescott heavy-duty, sawmill machinery. It's specifically designed to meet today's needs for higher production, lower costs and greater dependability in every phase of sawmill operation. We'd like to show you how Prescott can help you increase the efficiency of your mill and thus help you to make more money year after year.

CALL, WIRE OR WRITE for complete information, detailed technical data, illustrated literature or the services of a trained sawmill engineer. No obligation, of course.

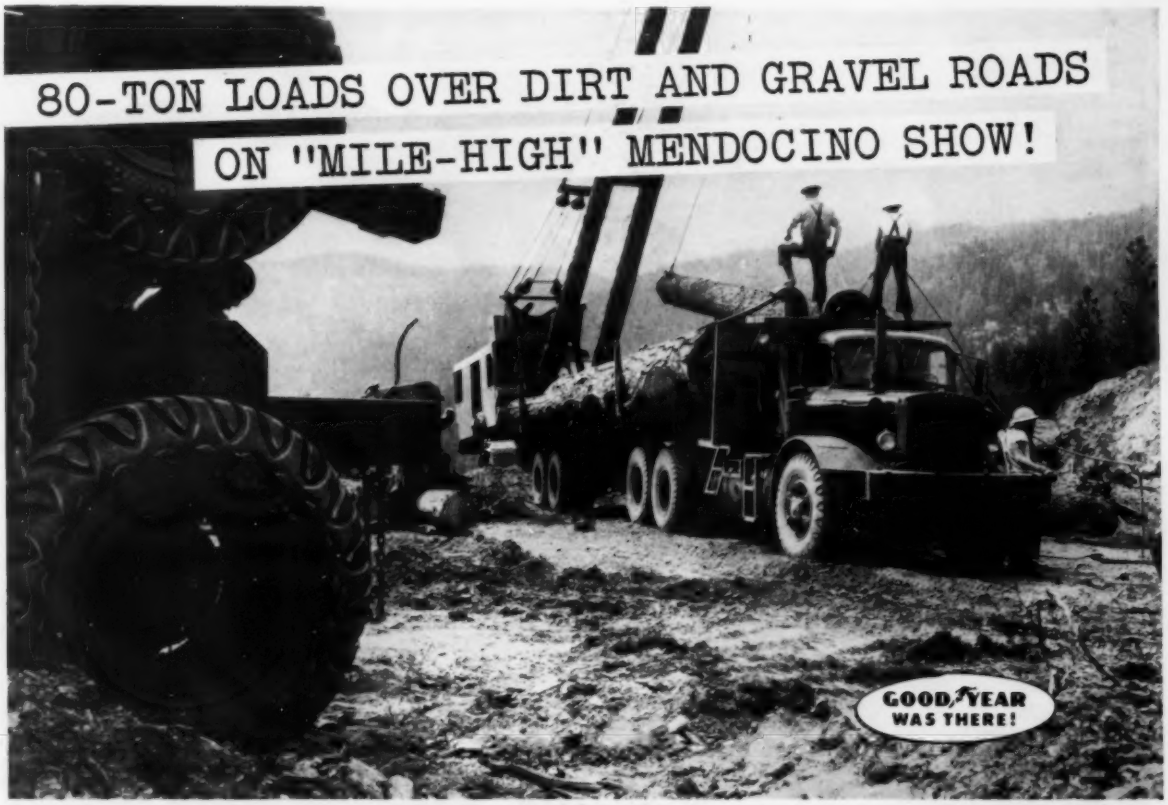
For Profitable Sawmill Operation... **SPECIFY**

PRESCOTT

HIGH EFFICIENCY, HEAVY-DUTY SAWMILL MACHINERY

THE PRESCOTT COMPANY, *Menominee, Michigan*

80-TON LOADS OVER DIRT AND GRAVEL ROADS ON "MILE-HIGH" MENDOCINO SHOW!



FELLING AT 3,800 to 7,000 FEET—then a rapid 3,000-foot descent to the rough cutting mill about 20 miles away. Loads average up to 80 tons—and must be really *pushed* over rugged logging roads—to take out 130,000 board feet a day. That's the pace Crane Mills of Corning, California, is setting in its Mendocino National Forest operation—and Hard Rock Lug by Goodyear is the tire picked by this fast-stepping outfit to help keep the show rolling!

NOW IN 3-T NYLON OR RAYON CORD— TUBE-TYPE OR *TUBELESS!*

Look for this nearby Goodyear dealer sign for better tire values—better tire care.

Goodyear's latest big lift to loggers—

TUBE AND FLAP TROUBLES ENDED FOREVER

with Triple-Tempered 3-T Cord

TUBELESS TIRES!

INHERENTLY AIRTIGHT, Goodyear *Tubeless* tires and rims are standard, or can be specified, as original equipment on even the biggest vehicles.

And here's why it pays to use Goodyear *Tubeless* on your present equipment, too:

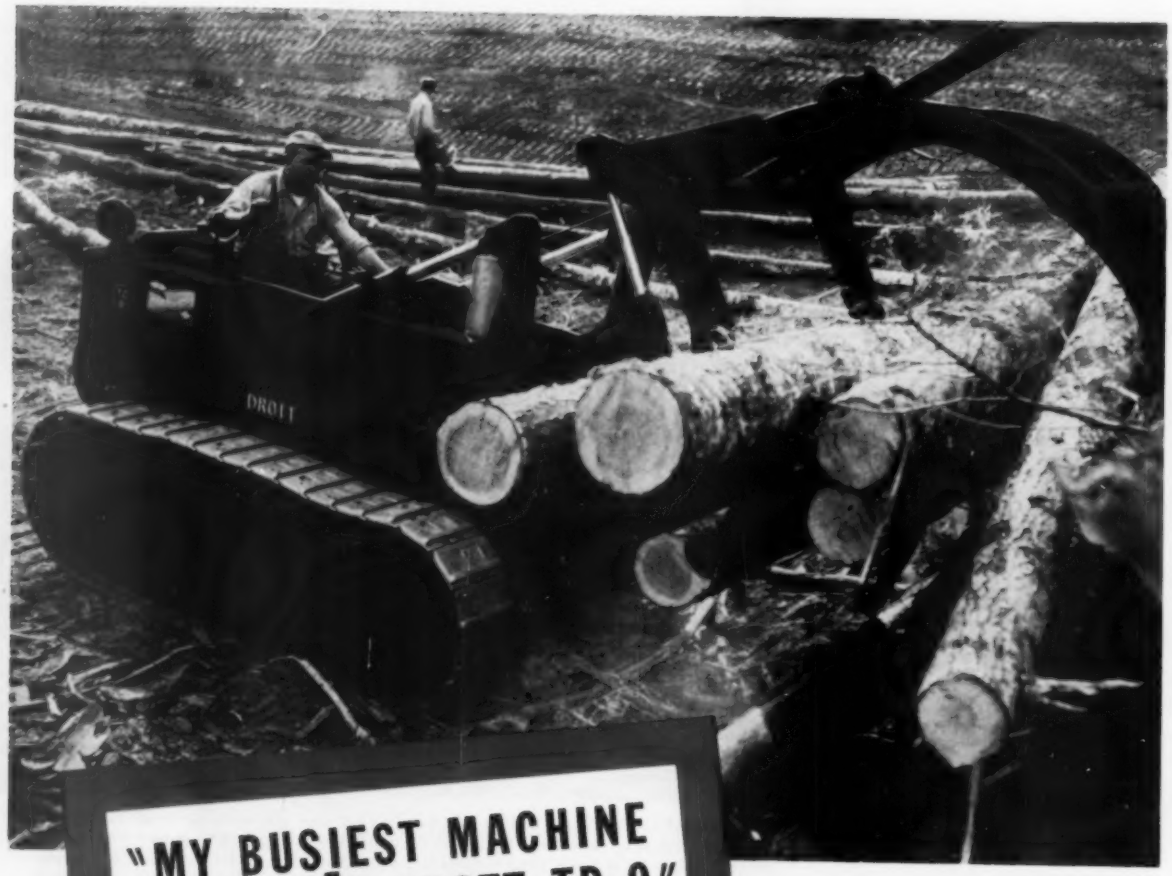
All regular Goodyear advantages of design and 3-T NYLON CORD—PLUS no tube or flap troubles—PLUS no tube replacements—PLUS easier mounting—PLUS airtight construction and assembly—PLUS cooler running—PLUS slow leaks instead of blowouts—PLUS easier repairs—PLUS simpler, re-usable valve parts!

Simply contact a nearby Goodyear dealer. Goodyear, Truck Tire Dept., Akron 16, Ohio.

Buy and Specify **GOODYEAR**

MORE TONS ARE HAULED ON GOODYEAR TRUCK TIRES THAN ON ANY OTHER KIND

Road Lug—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio



"MY BUSIEST MACHINE IS MY IH DROTT TD-9"

Stevenson Lumber Co.

Owner George Stevenson of Stevenson Lumber Co., Myrtle Point, Oregon, says, "Cutting 2nd and 3rd growth trees means handling a lot of small timber. To show a profit every man and machine has to keep busy. My busiest machine is the TD-9 IH-Drott. It loads logs on the main log deck, keeps tree tops and defective trees cleaned up and stacked, winches away slabs, loads peeler logs on trucks, dozes sites, lifts and sets machinery. One machine never did so many things so well as this IH-Drott is doing here."

"BIG RED" SAYS
See the new line of BONUS-POWERED Crawler Tractors now on display at all HOWARD-COOPER BRANCHES

Portland Headquarters:
5821 N. E. Glisan Street

Howard-Cooper Corporation

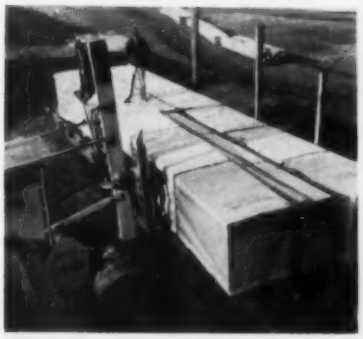
PORTLAND, OREGON

Branch Offices: ALBANY • CENTRAL POINT • COQUILLE • EUGENE • ROSEBURG • SEATTLE

Howard-Cooper Corporation **of CALIFORNIA . . . EUREKA and REDDING, CALIFORNIA**

IH CONSTRUCTION AND LOGGING TRACTORS • HOUGH PAYLOADERS • BERGER DONKEYS
OTHER LOGGING AND CONSTRUCTION EQUIPMENT

Our Cover Picture



WRAPPING AND strapping lumber for shipment on flat cars is receiving study by lumber mills, railroads and strapping companies. This Sisalkraft wrapped car lining, bound with Acme Unit Load Bands, is being loaded at Weyerhaeuser Timber Co., Longview, Wash. for shipment to Western Pacific Railroad at Sacramento.

Industry Meetings

June

National Wooden Box Assoc., Summer Meeting, Santa Barbara Biltmore, Santa Barbara, Calif., June 13-15.
National-American Wholesale Lumber Assoc., Hotel Vancouver, Vancouver, B. C., June 19-20.

July

National Wooden Pallet Manufacturers Assoc., annual national meeting, Williamsburg Inn, Williamsburg, Va., July 1-3.
Western Regional Meeting, Nat'l Wooden Pallet Mfrs. Assoc., Town House, Los Angeles, Calif., July 13.
Iowa State College Alumni Day, ISC Summer Forestry Camp, near Camp Sherman, Ore., 40 miles west of Bend. July 15.
National Wooden Box Assoc., Pacific Div., El Rancho Hotel, Sacramento, Calif., July 17-19.

September

Western Pine Assoc., Semi-annual meeting, Multnomah Hotel, Portland, Ore., Sept. 12-14.
Hoo Hoo, 65th Int'l convention, Fairmont Hotel, San Francisco, Sept. 18-20.
Forest Products Research Society, Joint Meeting, Inland Empire and Pacific NW Sections, Lewiston, Idaho, Sept. 24-25.

October

Canadian Institute of Forestry, annual meeting, Chicoutimi, Que., Oct. 4-6.
Society of American Foresters, annual national meeting, Memphis, Tenn., Oct. 14-17.

November

Pacific Logging Congress, St. Francis Hotel, San Francisco, Calif., Nov. 12-14.

December

Western Forestry & Conservation Assoc., Empress Hotel, Victoria, B. C., Dec. 5-7.

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JUNE, 1956 VOLUME 83, NUMBER 7

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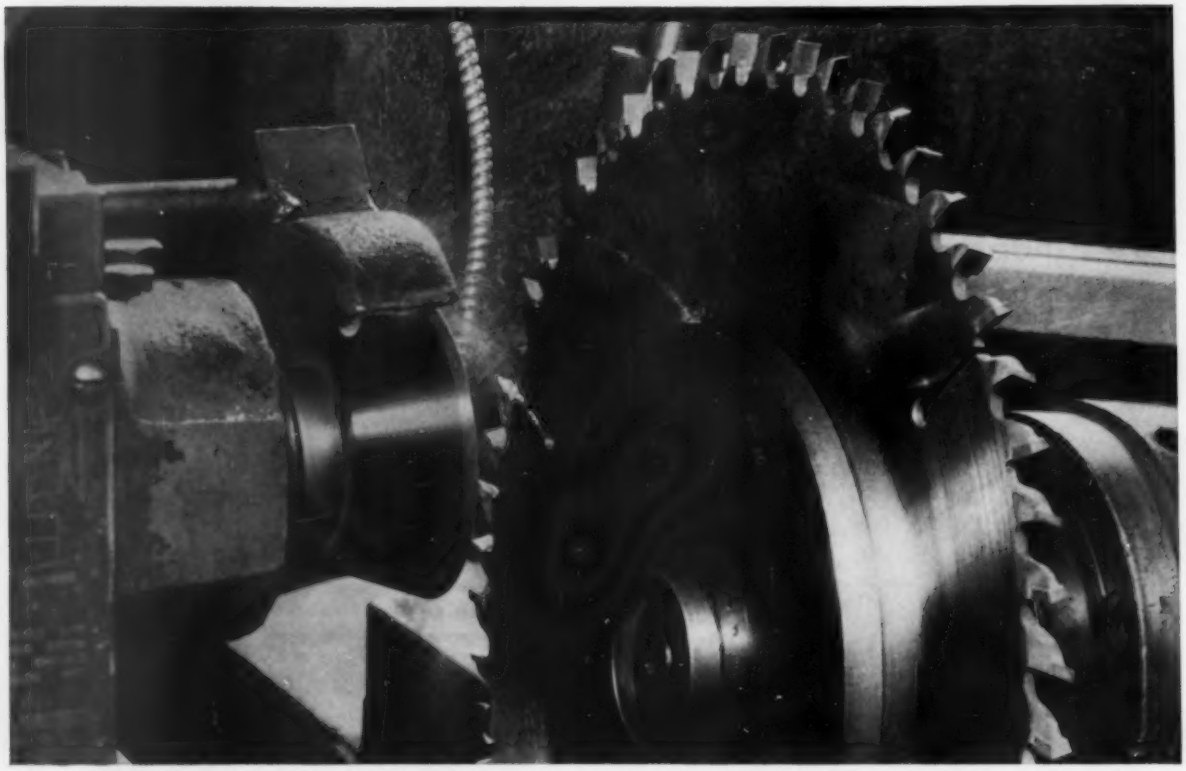
The best thing that could happen to this saw . . . is happening

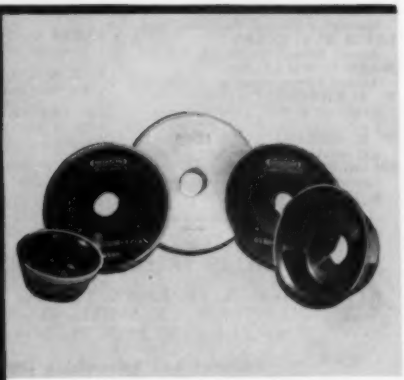


The Norton Diamond Wheel sharpening this carbide-tipped saw is engineered for the size-holding ability that assures uniform height to each individual tooth. Result: a better-performing saw that will give longer service between sharpenings. Extra fast cutting action and very low rate of wear are other money-saving advantages of Norton diamond wheels. Available in two resinoid bond types — regular B resinoid for wet grinding and B6 for dry grinding.

Diamond wheels save time and money in grinding carbide-tipped saws and cutters. The question is: *which diamond wheels save the most?*

Norton's long leadership in diamond wheel development and manufacture and Norton's priceless experience are your safest buying guides. Backed by many news-making "firsts", Norton diamond wheels are the recognized "Crown Jewels" for carbide grinding, with a reputation for cutting production costs.

See Your Norton Distributor for prompt deliveries, and for practical help in wheel selection. Or write to the nearest District Office of NORTON COMPANY, Worcester 6, Mass. Distributors in all industrial areas, listed under "Grinding Wheels" in your phone book, yellow pages. Behr-Manning, Troy, N. Y., a division of Norton Company. *Export:* Norton Behr-Manning Overseas Incorporated, Worcester 6, Mass. W-1701



The "Crown Jewels" For Carbide Grinding. Norton was first to introduce each type of diamond wheel — resinoid, vitrified and metal bonded . . . does all its own sizing, grading and laboratory checking of diamonds . . . duplicates wheel specifications with constantly controlled accuracy . . . brings you a complete line, with fast service from full stocks.

NORTON ABRASIVES

Making better products . . . to make your products better

NORTON PRODUCTS: Abrasives • Grinding Wheels • Grinding Machines • Refractories
BEHR-MANNING PRODUCTS: Coated Abrasives • Sharpening Stones • Behr-Cat Tapes

for every LOADING and EXCAVATION PROBLEM!

Northwest 95 does loading for Oregon Pulp & Paper Co.

HERE are two Northwests on the operations of the Oregon Pulp & Paper Co. of Cutler City, Oregon. The big 95 handles the loading of the trucks and loads approximately 2½-million feet at each landing. Note the size of the logs.

Fill is loaded from roadside pits by the Model 25 Shovel for keeping the log roads in good condition for the large loads. This is just one of the many examples of how Northwests are paying out on this successful show.

Northwest versatility fits Northwest equipment to all of your handling and construction problems and at the same time brings added value to the man that buys it from you. Now is the time to learn about Northwest advantages. Familiarize yourself with Northwest travel, the "Feather-Touch" Clutch Control, the Cushion Clutch, Uniform Pressure Swing Clutches, and above all — Northwest Convertibility. A Northwest man will be glad to explain these features to you.

NORTHWEST ENGINEERING COMPANY
1510 Field Building • 135 South LaSalle Street • Chicago 3, Illinois

Model 25 Shovel loading fill at roadside pit for logging road maintenance.

NORTHWEST

NORTHWEST SALES OFFICES:

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255 Tenth Street

VERNON 58, CALIFORNIA
3707 Sante Fe Avenue

GI-10-LG

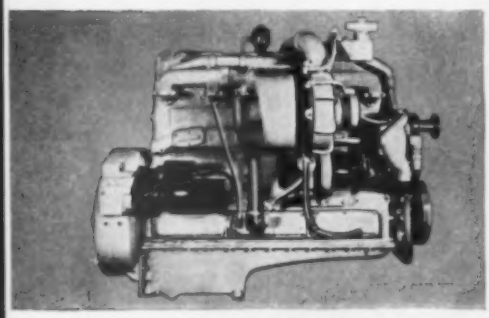
Announcing the NEW International®

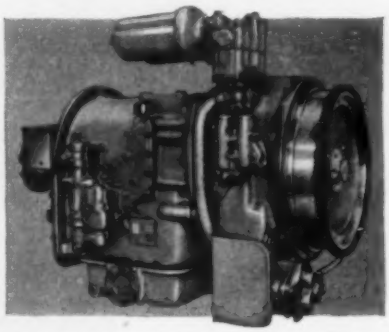
MODEL 65 18 tons **MODEL 95 24 tons**

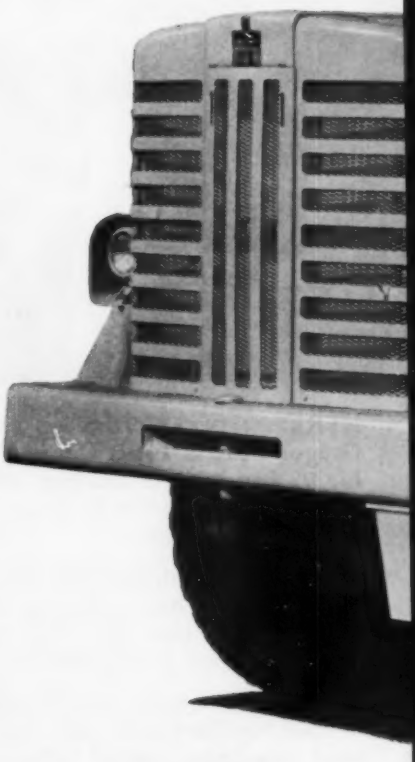
Designed with the features you asked for

Hundreds of contractors, mine owners, quarry operators, and other equipment users told our engineers what they needed in an off-highway hauler. Their suggested design features have been carefully built into the new International Payhaulers. In these rugged, all-new, rear-dump haulers, you have greater horsepower-to-payload weight ratios than are available in most other off-highway trucks. You have stronger main frames to carry bigger payloads with rugged dependability. You have higher hauling speeds . . . full-power hoists for faster dumping . . . better all-around visibility.

These features are the result of rigorous, field testing. Payhaulers have worked on many contracting, mine, quarry, and similar jobs. Others have run "round-the-clock" at our proving grounds. Others have undergone painstaking laboratory research. Now all this testing is completed and the Payhaulers are ready to roll. You owe it to yourself to check their features. Our test users did—and, as proof of outstanding Payhauler performance, a great many have placed their orders. Compare Payhaulers with your present hauling units to see what profit-making features you will get.



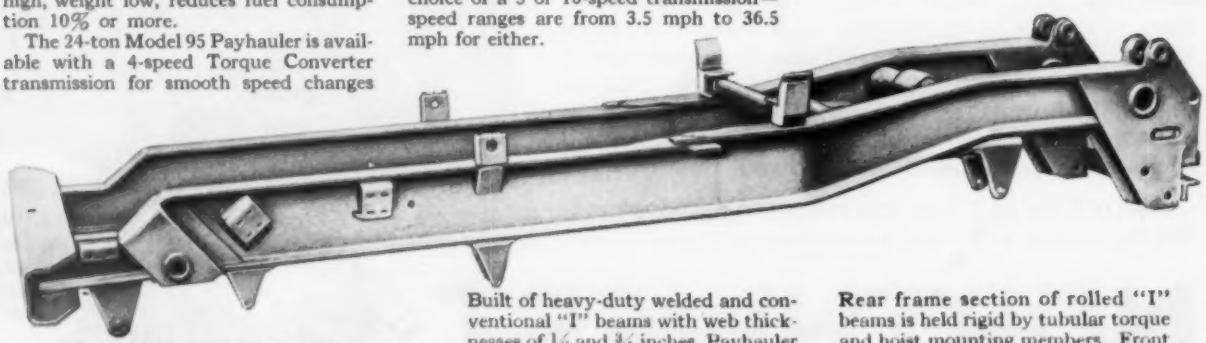




TURBO-CHARGED DIESEL ENGINES—CHOICE OF TRANSMISSIONS—Both the "65" and "95" Payhaulers have more horsepower per truck yard than any other truck in their size classes. The 24-ton, 16-yard "95" is powered by a 335 hp diesel...the 18-ton, 12-yard "65" is powered by 250 hp. Turbo-charging keeps power high, weight low, reduces fuel consumption 10% or more.

The 24-ton Model 95 Payhauler is available with a 4-speed Torque Converter transmission for smooth speed changes from 4.8 to 38 mph. A lock-up clutch for direct drive performance and a Torqmatic brake system are standard with the Torqmatic transmission. Also available for the "95" Payhauler is a 9-speed transmission which provides an excellent range of speeds from 2.6 to 37.2.

In the Model 65 Payhauler you have a choice of a 5 or 10-speed transmission—speed ranges are from 3.5 mph to 36.5 mph for either.



RUGGED, ALL-WELDED FRAME STRONGEST AVAILABLE—Built of heavy-duty welded and conventional "I" beams with web thicknesses of ½ and ¾ inches, Payhauler main frames have the strongest known section modulus of *any* off-highway truck.

Rear frame section of rolled "I" beams is held rigid by tubular torque and hoist mounting members. Front frame members flex with shock loads through channel bumper torque member.

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1234 Sixth Avenue, South

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255 Tenth Street

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3707 Sante Fe Avenue

GL-10-LG

Payhaulers®

- 250-335 HP Turbo-Charged Diesel Engines
- Rugged All-Welded Steel Frame
- Full-Floating Axles Planetary Drive
- Speeds to 38 MPH
- Power Shift Transmission

ALL WELDED ROCK-RUGGED BODIES—The Model 95 Payhauler shown is equipped with heated body. Quarry bodies available for both the Model 65 and 95 Payhaulers.

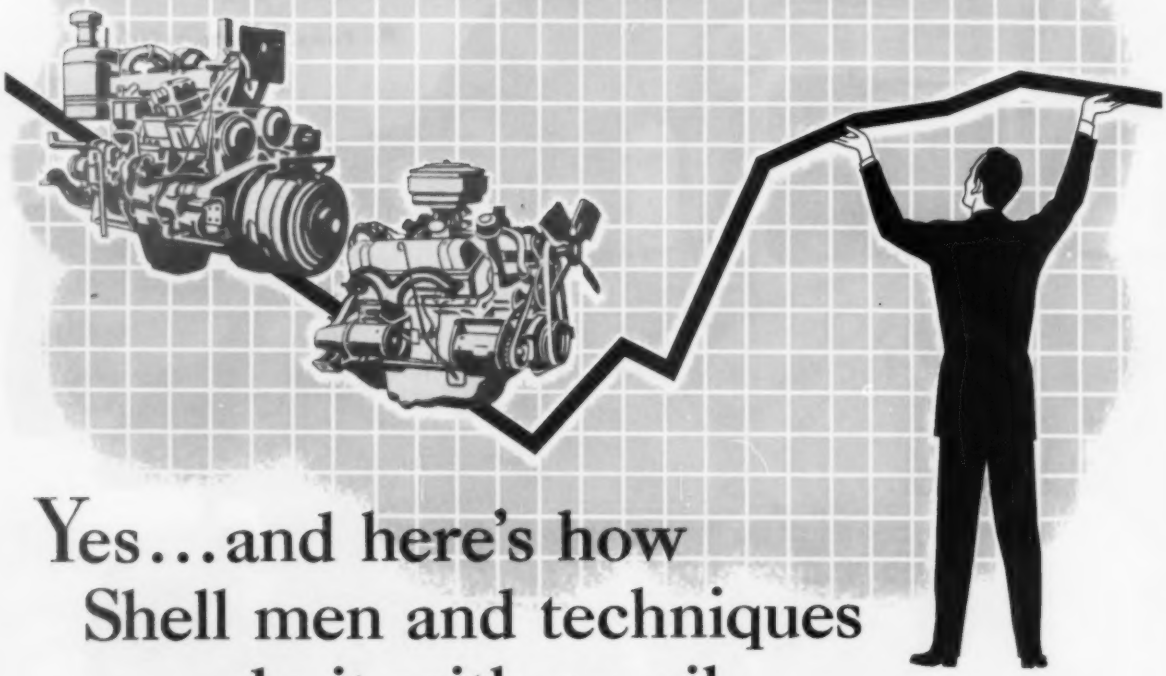
INTERNATIONAL HARVESTER

INTERNATIONAL® Construction Equipment

International Harvester Company, 180 N. Michigan Avenue, Chicago 1, Illinois

A COMPLETE POWER PACKAGE INCLUDING: Crawler, Wheel, and Pipe-Boom Tractors . . . Self-Propelled Scrapers and Bottom-Dumps . . . Crawler and Rubber-Tired Loaders . . . Off-Highway Trucks . . . Diesel and Carbureted Engines . . . Motor Trucks

Can the working life of gasoline and diesel engines be extended?



Yes...and here's how Shell men and techniques do it with an oil

The *cause* of engine wear—that's where Shell Research men began. Finding that *harmful acids* are the major cause, they set out to develop an oil which could *stop* acid action.

Result? After years of testing countless new formulas, the Shell Research team developed SHELL ROTELLA OIL—a tough, heavy-duty oil that adds years to gasoline and diesel engine life... an oil that can save hundreds of dollars in replacement costs.

Shell Rotella not only stops acid action, but keeps engines *clean* as well. A truly balanced oil, it also has detergent-dispersant and oxidation inhibiting properties.

Rotella is just one of the fine products developed by Shell's 1500-man research team—a team with 25 years' experience in gasoline and lubrication problems.

A telephone call can put this team to work solving your lubrication problems. Call in your Shell representative today.

SHELL

SHELL ROTELLA OIL

Packaged Lumber Beats ALL Outdoors

FOR STORAGE . . .

IN TRANSIT . . .

LOADING AND UNLOADING . . .

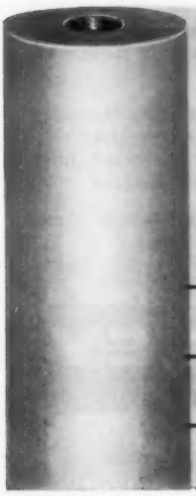
Here's how you benefit and your customer saves money from packaged lumber!

1. You give your customers what they want — the means of saving handling and storage cost by using modern material handling equipment.

2. You are known as a progressive lumber mill — whose leadership in modernizing shipping methods for the benefit of your dealers reflects the high quality of your products and service.

You will be vitally interested in the facts and figures which we have showing how firms such as yours have profited by packaging lumber. Let us send you a copy of the booklet "How to Protect Lumber with Waterproof Paper for Shipment and Storage".

Prefabricated lumber covers as well as standard roll widths are available for packaging lumber.



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Waterproof

Airtight

Strong!

AMERICAN SISALKRAFT CORPORATION
DEPT. LU6, ATTLEBORO, MASS.

Please send me the booklet "How to Protect Lumber with Waterproof Paper for Shipment and Storage".

Name.....

Company.....

Address.....

City..... *Zone*.... *State*.....

Type A Shredder reduces oversize chips and bark.

Large Wood Hog shreds bark and broken pulp logs.

JEFFREY SHREDDERS

for making hard board, chip core and chip board ...reducing oversize chips, bark and wood waste

Jeffrey Shredders can produce an ideal chip for making hard board and chip core. Our machines can be equipped with specially designed internal parts for this lucrative application. Many producers are already turning lumber waste to profit. Write today—we'll tell you how Jeffrey Shredders play a part in the manufacture of this new building material.

Other popular shredder uses:

Pulpwood plants: oversize dry or green wood chips, caught by the screen as they come from the Chipper, are reduced by a Jeffrey Re-chipper in one operation, to a size suitable for digesters.

Bark and broken pieces of pulpwood, taken from the barking drums, are reduced to proper size for boiler fuel by Jeffrey Shredders.

Furniture factories: wherever furniture or other hard wood products are manufactured, the waste can be processed in Jeffrey Wood Hogs to supply fuel for plant boilers.

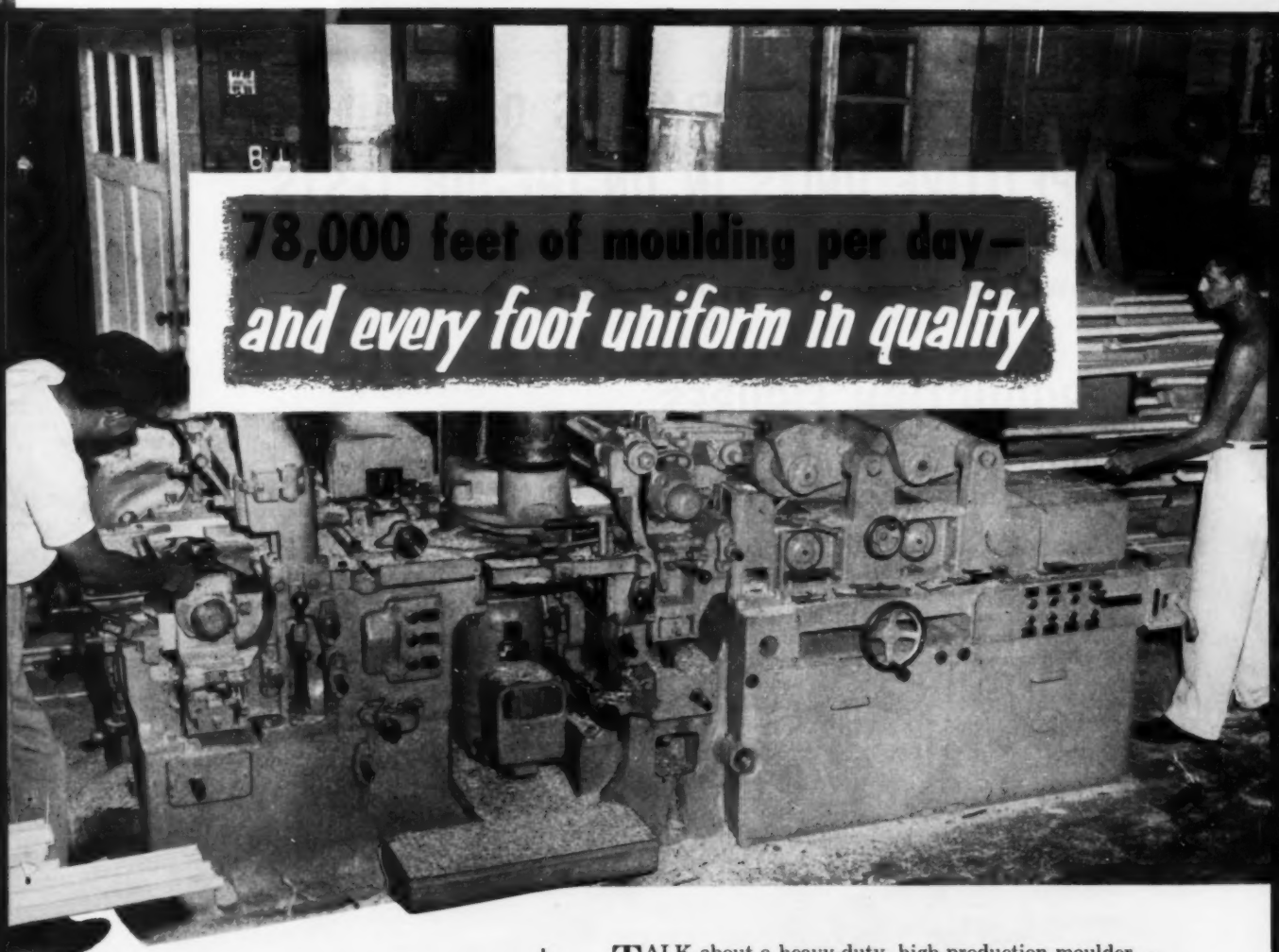
Other manufacturing: to shred hogged pine stumps to a fine product for extraction of turpentine, rosins and related chemicals. To reduce waste paperboard for re-use in making paperboard or insulation. To break bales of Kraft sheets, groundwood lap or sheets and other materials.

Remember, Jeffrey Swing Hammer Shredders and Wood Hogs have no knives that need sharpening. Wood is torn or shredded, never ground, resulting in a superior product.

Write for Catalog No. 855. The Jeffrey Manufacturing Co., Columbus 16, Ohio.

JEFFREY

CONVEYING • PROCESSING • MINING EQUIPMENT • TRANSMISSION MACHINERY • CONTRACT MANUFACTURING



78,000 feet of moulding per day— and every foot uniform in quality

That's profitable production . . . the kind Shaw Mfg. Co., Sumter, South Carolina, gets from this

Yates-American C-99 Moulder

TALK about a heavy-duty, high-production moulder — the C-99 is it!

For one thing, you get rapid changes in set-ups. At Shaw Mfg. Co., Sumter, S. C., for example, they run 160 feet of moulding per minute. And they use more than 75 different patterns, so changeovers are frequent.

Shaw moulder operators also like these other advantages of the C-99: The powerful feed-works. The upper rolls that adjust themselves to thick or thin lumber. The extra safety provided by the spindle brakes.

G. W. Shaw, president, writes, "There are so many good features about the C-99 moulder that we could hardly enumerate them all. All we have to say is the very highest praise."

See for yourself why woodworkers everywhere are so enthusiastic about the Yates-American C-99 Moulder. Ask the Yates-American man to show you one in actual operation. And mail the coupon for bulletin.

WOODWORKING MACHINERY MANUFACTURERS' ASSOCIATION — WMMA

YA®

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First with the *Finest* in woodworking machinery

Established in 1883

MATCHERS • MOULDERS • SURFACERS • RIPSAWS • RESAWS • SANDERS

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CAT* LOWBOWL SCRAPERS OUTLOAD COMPETITIVE UNITS IN ON-THE-JOB TESTS

Check the figures—here's proof it pays to use LOWBOWL Scrapers for your haul road construction

PRODUCTION FIGURES

ON ACTUAL ROAD-BUILDING JOBS UNDER IDENTICAL CONDITIONS

Comments: Cat LOWBOWL units, hauling bigger loads, were also consistently faster in cycle times. For example, matched against Scraper-unit C on a 4250-foot round-trip haul, the Caterpillar rig's average total cycle time was 4.77 minutes against 5.28 minutes. This meant more trips per hour for the Cat LOWBOWL Scraper —and an average of 40 cu. yd. an hour more production!

	AVERAGE LOAD IN CU. YD.
LOWBOWL Unit	18.1
Scraper-unit A	14.8
LOWBOWL advantage	3.3
LOWBOWL Unit	18.1
Scraper-unit B	14.3
LOWBOWL advantage	3.8
LOWBOWL Unit	18.0
Scraper-unit C	16.5
LOWBOWL advantage	1.5
LOWBOWL Unit	18.1
Scraper-unit D	14.3
LOWBOWL advantage	3.8

Matched against competitive scrapers on different jobs under similar conditions, Caterpillar LOWBOWL Scrapers have time and again handled bigger loads faster. No question about it, LOWBOWL design pays off in more work at lower cost!

With the new Cat LOWBOWL Scrapers, you can build haul roads faster and at lower cost than ever before. You have your choice of the new two-wheel DW21-No. 470 shown above, or the new four-wheel DW20-No. 456.

Both have capacities of 25 cu. yd. heaped and 18 cu. yd. struck. Both are sturdily built to stand up under the beating of rough woods terrain and tough material. Their LOWBOWL design loads more material with less resistance clear to the end of the loading cycle for quicker heaped loads. And their new Turbocharged 6-cylinder engines deliver 300 HP (maximum output) and 10% more rimpull. There's plenty of power for fast loading, hauling against adverse grades and dumping in tough conditions. Another plus: New tubeless tires, available at no extra cost, eliminate an estimated 80% of down time caused by tires.

Your nearby Caterpillar Dealer, a reliable source of service and information, will be glad to give you complete production facts and figures about new LOWBOWL Scrapers on road-building jobs. Name the date—he'll demonstrate!

Caterpillar Tractor Co., San Francisco, Calif.; Peoria, Ill., U.S.A.

CATERPILLAR*

*Caterpillar and Cat are Registered Trademarks of Caterpillar Tractor Co.

BIGGER, FASTER LOADS WITH CAT LOWBOWL SCRAPERS

The
LUMBERMAN'S

LATE FOREST INDUSTRIES NEWS

These Are the Names in the News-

• Robert D. Schultz announces formation of Robert Schultz Timber Co., Ltd., in the factoring of logs, sawmills, timber, shingles, shakes and other forest products. He has been associated with the forest industry in British Columbia for the past eleven years. His brother heads C. D. Schultz & Co., forest consultants in Vancouver, B.C.

• Myron B. Savage has been appointed Forest Industries Specialist for Motorola Communications & Electronics, Inc. in Oregon, Washington and Northern Idaho. Savage, a graduate of the University of Washington, was communication supervisor and forester-photogrammetrist for the past 10 years for Rayonier Incorporated, Hoquiam, Wash., and a member of the executive board of the Western Division of Forest Industries Radio Communications.

• J. O. Parrish has been named production manager of the Diamond Match Company's California Lumber Division. G. W. Baker has been named sales manager.

• Henry W. Jones, of Cathey-Williford-Jones, Inc., Memphis, Tenn., has been elevated to president of Southern Hardwood Producers, Inc. He succeeds Lawrence D. Kellogg, of L. D. Kellogg Lbr. Co., Alexandria, La., who became chairman of the board. E. R. Thomas, of Thomas & Proetz, St. Louis, Mo., was named vice-president and L. J. Heatherly re-named secretary-treasurer. Headquarters of the hardwood group is in Memphis.

• The Ralph L. Smith Lumber Co., Anderson, Calif., has purchased the Mount Shasta Pine Manufacturing Co., Mount Shasta, to be operated as the Mount Shasta Division. The plant has been supervised in recent years by Robert Kohn who will continue as a resident manager. A. B. Hood is general manager of the Ralph L. Smith Lumber Co.

• The National Safety Council has awarded a Public Interest Award for 1955 to THE LUMBERMAN, in recognition of the magazine's editorial emphasis on safety in logging and milling operations. The non-competitive award is made annually to public information media for exceptional service to safety. THE LUMBERMAN was also a recipient of the award for 1954.

• Gerald W. Flynn, Jr., has been elected president and general manager of the A. C. Dutton Lumber Corp., succeeding John A. Birkenhead, who has retired. Mr. Flynn's career with Dutton began at the Dutton Providence, R.I. office in 1947. At the Poughkeepsie, N. Y. general offices Mr. Flynn has served as general sales manager and assistant general manager. He was elected a vice president of the company in 1955.

• A. V. Backman, who has spent his entire working life in the forest industry and who until recently was manager of the logging operations of MacMillan & Bloedel at Franklin River in the Alberni, B.C. country, has been appointed director of forest operations for Columbia Cellulose Co. at Celgar, where he will work on special assignments under the direction of Charles B. Dunham.

• Ted Crosby, of North American Weather Consultants, has been in British Columbia trying to sell the idea of stimulated rain-making as a means of reducing the fire hazard in the province's forests.

• T. H. O'Melia, Vice-Pres., Scotch Lumber Co., Fulton, Ala., has been elected to fill the newly created Southern Pine Association office of "Vice-President for Trade Promotion." O'Melia succeeds Latané Temple, who headed the Association's Trade Promotion Committee since 1954. He has served as a member of the Association's Trade Promotion Committee for several years and is also active in the Regional Quality Program in the Mobile, Alabama, area.

• Lester E. Anderson has joined the staff of the Lumberman's Buying Service of Eugene, Oregon, according to a recent announcement by H. J. (Herb) Cox, President. Anderson was formerly director of public services at the University of Oregon. He will be in charge of promotion and public relations for the 24-year old lumber market analysis firm.

• Former employees of Kelowna Sawmill Co.'s sash and door plant in the Okanagan valley of British Columbia have incorporated a new company, Kelowna Millwork, Ltd., to continue the operation which had been threatened with shutdown by the original management because of a new policy to terminate its retail business.

HALL HEAVY HAULING CO.
Eugene, Oregon

MURPHY LUMBER CO.
Portland, Oregon

F. J. HANTZE
Lebanon, Oregon

WEYERHAEUSER LUMBER CO.
Longview, Chehalis and Molalla, Washington

ASSOCIATED LUMBER & BOX CO.
Wilseyville, Calif.

FISCHER LUMBER CO.
Marcola, Oregon

leading timber fleets get

- **SAFE, NO-FADE BRAKES**
- **MORE MILES BETWEEN RELINES**
- **REDUCED DRUM EXPENSE**

Testimonial letters from these fleets available on request.

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WORLD BESTOS LOGGERS' SPECIAL

...the brake block combination that's made for BIG RIGS doing BIG JOBS!

World Bestos LOGGERS' SPECIAL... using two high friction RED BLOCKS... the only brake block with a NO-FADE GUARANTEE

● Brake fade, short lining life and ruined brake drums can add thousands of dollars a year to logging costs. That's why so many successful fleet operators now insist on World Bestos LOGGERS' SPECIAL . . . the only brake block combination that *solves* these costly brake problems! Their experience proves conclusively that LOGGERS' SPECIAL with the exclusive NO-FADE GUARANTEE gives safer, more dependable stopping power under all conditions. Their records, covering millions of miles on the job, prove also that LOGGERS' SPECIAL delivers more miles between relines, reduces downtime for brake maintenance . . . actually pays for itself in savings on brake drums alone!

prove it for yourself!

Test LOGGERS' SPECIAL on your biggest, hardest-working rig. Compare stopping power, drum wear and per-mile operating cost with any brake blocks you are now using.

WORLD BESTOS • NEW CASTLE, INDIANA

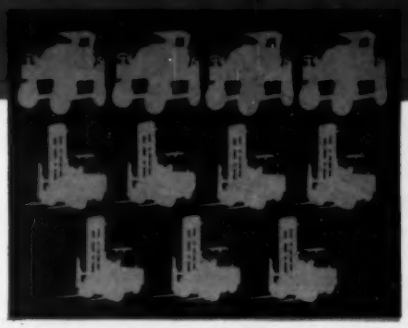
For full information about LOGGERS' SPECIAL and other World Bestos Brake Blocks, contact one of these World Bestos Warehouses:

LOS ANGELES, Calif., A. H. Ross & Co., 843 S. San Pedro St.
SAN FRANCISCO, Calif., F. Somers Peterson, 524 Folsom St.
PORTLAND, Ore., Sparks-Wills, Inc., 511 S.E. Market St.
VANCOUVER, B.C., Western Equipment, Ltd., 102 Main St.

Hollow Tree Lumber Co.

"TEAMS" 11 GERLINGERS FOR 36 MILLION BOARD FEET

JOB PROVED



4 MATERIAL CARRIERS and 7 FORK LIFT TRUCKS BOOST ANNUAL PRODUCTION OF MAJOR WESTERN MILL

"Gerlinger carriers and lift trucks make an unbeatable work team!" reports Lee Vostmyer, superintendent of Hollow Tree Lumber Co., Ukiah, California. And he has the figures to prove it: 36,000,000 board feet in 1955.

The specific duties the 11 Gerlinger giants perform for this well-known redwood mill would fill this page. Suffice to say ... if the job is loading, feeding, moving, lifting, stacking, turning or tiering ... logs and lumber are handled with typical Gerlinger dispatch two, and often three, shifts per day.

Production and profit records can be YOUR story, too, when materials are handled the Gerlinger-way. Make your Gerlinger dealer prove it now.

It PAYS to "STANDARDIZE" on GERLINGER.

(1) Gerlinger-planned installation of JOB-PROVED companion units insures production line efficiency.

(2) Performance responsibility assumed by one manufacturer, a pioneer in the materials handling field.

(3) Three large parts depots and 55 Gerlinger distributors guarantee fast, dependable parts service.

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DEPT. T-5 • DALLAS, OREGON
Please send FREE Gerlinger
Fork Lift Truck catalog ..... ☐
Material Carrier catalog ..... ☐

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Zone_____ State_____

GERLINGER PRODUCTS

G-485

Mountain Side Logging . . .

NO PROBLEM for Skagit SJ-4-RT MOBILE LOGGER

Case History . . .

Owner: Kootenay Forest Products Co. Nelson, B. C.

Type of Operation: Steep Hillside, tough, mountainous terrain.

In the above operation the Skagit SJ-4-RT Mobile Logger is loading without guylines, on a steep hillside, near Nelson, B.C. – working on six different operations in six months.

Woods manager R. B. Walkley says: "Time loss in moving was kept to a minimum through the ready maneuverability of the 6 x 6 undercarriage. The weight of the machine is well distributed to give positive traction on all grades and the short wheel base makes it highly maneuverable on our mountainous roads."

On these sidehill jammer operations, with many moves from deck to deck, moving was done between trucks. The SJ-4-RT's hydraulic outriggers and counter weight made guylines unnecessary on these loading operations.

During the winter "CAT" operation this Skagit Mobile Logger loaded the entire daily production – 114,000 ft., 340 pieces, from three landings, in an eight hour shift!

Last year three jammers were employed to service three landings in a similar operation. This year's more efficient loading "has saved a considerable loading cost and has resulted in an increased production per truck per day."

There is a Skagit Mobile Logger for Every Type of Operation.

Consult your Skagit Dealer or the Factory for complete information

"SKAGIT" TRADEMARK REGISTERED U. S. PATENT OFFICE

SKAGIT STEEL & IRON WORKS SEDRO-WOOLLEY, WASHINGTON U. S. A.

• Simpson Redwood Co., an affiliate of Simpson Logging Co., Shelton, Wash., with a sawmill at Klamath, Calif., and a remanufacturing plant at Arcata, Calif., has engaged H. A. Simons Consulting Engineers to draw plans for a pulp mill and foodboard plant which the company hopes to build at Eureka, Calif. A 300-ton mill is planned. Because adequate water has to be obtained and because plans for the two units still have to be prepared, company officials anticipate that it will be at least two years before the plant can be brought into production. There have been rumors that have not been denied that the pulp and foodboard plant will be a joint venture of the Simpson Redwood Co. and Fibreboard Products, Inc. Simpson officials declined to discuss this point, but did confirm that Mr. Simons had been engaged to draw plans for the plant. They said there was no secret of their intention to get into the pulp and board business.

• Permanent closure of the Panel Door Division of the M and M Wood Working Co., Portland, Ore., has been announced by President Clay Brown. In a letter to the division's 179 employees the company stated that "adverse economic conditions beyond our control indicate this will be a permanent closure".

• Employees of Dierks Lumber Co., Kansas City, Mo., have formed their own credit union. The new credit union will encourage thrift and regular saving among members, and enable them to get personal loans for good purposes at low cost. Employees in the lumber and wood products industries now operate 143 credit unions. In North America, there are now over 21,500 credit unions with 10 million members, according to the Credit Union National Association.

• Fruit Growers Supply Co., is closing its Westwood, Calif., mill. Some equipment will be moved to the company's mills at Susanville an Hilt, Calif. The rest will be sold. Closing of his big mill is due to the fact that tributary lumber is now too remote.

• In a recent article in the Christian Science Monitor, S. W. Antoville, president, United States Plyword Corp., said that the company will have to build another Novoply plant unless the output of the company's present Novoply plant at Anderson, Calif., can be materially increased.

• The Diamond Match Co. has announced plans to develop foreign markets in the field of specialty packaging. According to Robert G. Fairburn, president, Diamond has contracted to purchase for cash the 360,000 outstanding one £ par ordinary shares of Hartmann Fibre Co. Ltd., major British producer of molded plup products. "The demand for molded pulp products," said Mr. Fairburn, "especially for the prepackaging of meats and produce, is expanding rapidly. This acquisition of Hartmann Fibre, puts The Diamond Match Co. in a strategic position to participate in the expanding market for these packaging products in various areas overseas."

Late Forest Industries News

• A veteran export lumberman, B. K. (Barney) Frank, has been named general manager of the Douglas Fir Export Co., Portland, Ore., succeeding D. C. Moore who resigned. Frank was export manager of Pacific Export Lbr. Co. for many years. One of the founders and officers of the Portland Shipping Club, Frank has been a member of the foreign trade committee of the Portland Chamber of Commerce, member of the West Coast Advisory Committee of the U. S. Dept. of Commerce, and is presently a director of the Japan Society of Oregon.

• Walker Hamilton has been appointed a special consultant to the Forest Products Division of Olin Mathieson Chemical Corporation, according to Robert H. Evans, vice president and general manager of that division.

• George V. Hjort, vice president-manufacturing division, Boise Payette Lumber Co., Boise, Ida., has been elected chairman of Intermountain Section, Society of American Foresters.

• Williams A. Cotton vice president of Masonite Corp., and since 1954 general manager of the company's Ukiah, Calif., operations, has been made manager of all the company's manufacturing activities with headquarters in Chicago.

• James A. Egan has been promoted and transferred to become Forest Supervisor of the Deschutes National Forest at Bend, Ore. He replaces Ralph W. Crawford who has been transferred to post of Forest Supervisor, Coconino National Forest, Flagstaff, Ariz.

• Cecil V. Gray, of Seattle, head of the Gray Lumber & Shingle Co., died recently as a result of an automobile accident. He was thrown from his car in a collision. He was 61. His firm is one of the largest and oldest wholesale lumber and shingle companies in the Northwest.

• Promotions for several officials of Northwest Timber Co., Coeur d'Alene, Idaho, announced by Mort J. Huetter, general manager, are as follows:

Doug Rarick, former night plant supervisor, was named plant superintendent; William Bailey, certified grader, is new night foreman of the planing mill.

James A. McKahan, former assistant manager of the logging department, was named manager of the logging and lands department, succeeding Jack Breen, one of the Inland Empire's best-known old timers in lumbering. He becomes executive vice president of Mount Spokane Lumber Co.

Charles M. Rogers, formerly with the Montana state forestry department at Missoula, has been added to the company's logging department staff.

DIRECT-FLO

DOWNER LUMBER COMPANY

DRY KILN

Over in the Lodge Pole country mass handling is almost a must, due to the very small logs that are handled. Downer Lumber Company applied this principle all along the line and especially in its Dry Kilns.

A three-track, 88-foot-long, single compartment Lovsted "DIRECT-FLO" Dry Kiln—holding capacity runs up to 176,000 board feet.

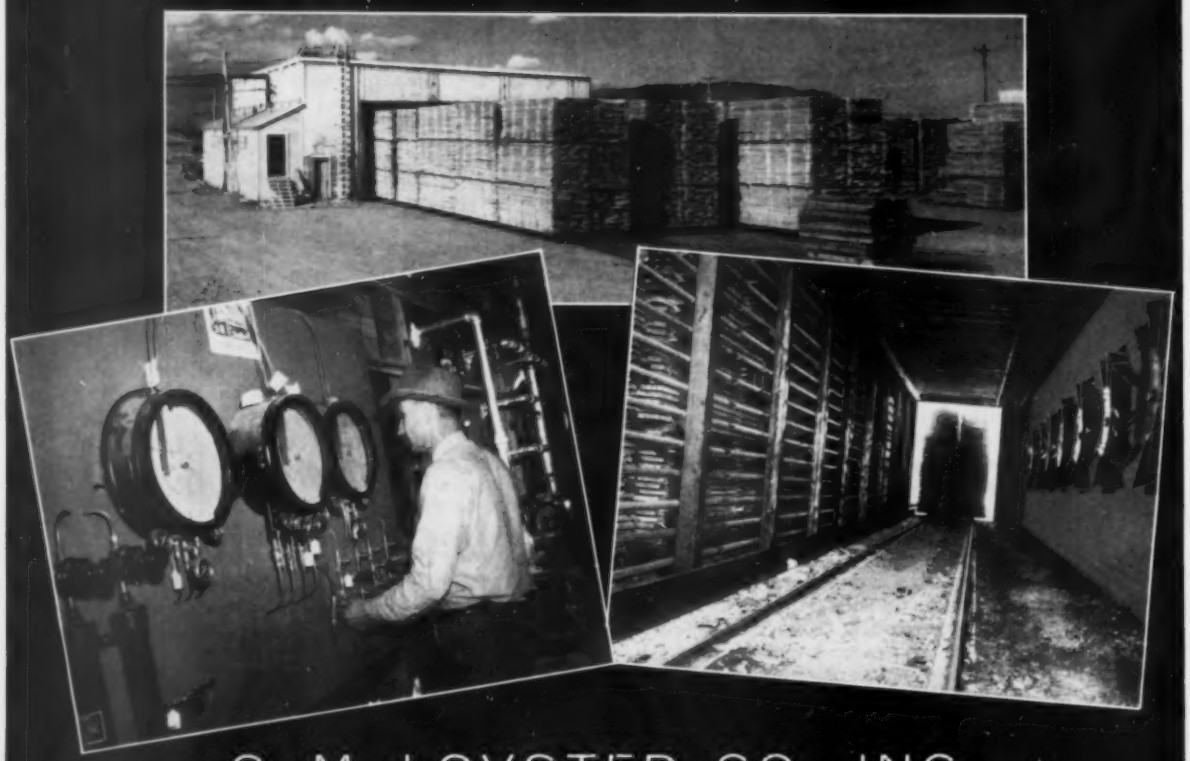
Finned 1-inch pipe makes up all the heating system including two booster coils.

The heating system is zone controlled with two (2) 2-pen, 4-bulb Temperature Controllers and Recorders control booster coils; one 3-pen, 5-bulb Humidity and Temperature Recorder Controller handles the main coil.

Eight high-volume Lovsted Alloy Heat-Treated Aluminum Fans driven by individual 5-H.P. motors produce the necessary medium for removing the moisture from the surface of the lumber.

Doors are at both ends of the kiln which allows greater flexibility in the loading and unloading of the kilns.

An automatic gas-fired boiler produces steam for the kilns.



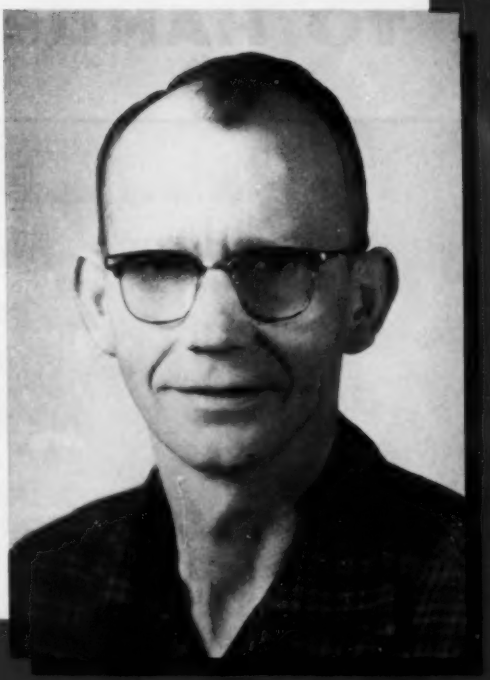
C. M. LOVSTED CO., INC.

4000 WEST MARGINAL WAY, SEATTLE 6, WASH.

SAN FRANCISCO • LOS ANGELES • HONOLULU • VANCOUVER • MANILA

"You've Got to Keep Going"

". . . and with Kenworth you can," says Olgar Sandberg, long-time contract logger and Kenworth customer, operating out of Port Angeles on Washington's Olympic Peninsula. "Weather, grades or roads can't stop you if you're going to show a profit in this business," Mr. Sandberg says, "and that demands a lot of stamina, power and performance from your trucks. So I chose Kenworths." Operating a fleet of Kenworth Model 523 trucks, Mr. Sandberg hauls on private roads and on the highway, and is widely known on the Olympic Peninsula for his ability to keep moving logs even when others have to stop. The dependability engineered into every Kenworth truck thus proves to another successful logger that...



...There's more WORTH in KENWORTH

KENWORTH

TRUCKS + BUSES

FACTORY AND HOME OFFICE: SEATTLE, U. S. A. DISTRIBUTORS IN THE UNITED STATES AND MOST FOREIGN COUNTRIES

PACKS THE SOCK TO HANDLE ROCK!

This D9 is assigned to 25 miles of new road construction for Collins Pine Co. The outfit is 100% Caterpillar-powered in the woods. Says Logging Superintendent J. E. Garrett: "We get top performance from our Caterpillar-built units in any kind of weather and all conditions. During the winter months, we regularly log in 5 feet of snow with them."

286 HP **CAT*** D9 Tractor with No. 9A Bulldozer picked by Collins Pine Co. to pioneer in rough going

You're looking at a 73,000-pound D9 (as equipped) pioneering a logging road for Collins Pine Co., northeast of Chester, Calif. In many spots, the D9 pioneered work on 40-45° slopes. With its 286 HP heft, it handled material from rocky patches to boulders, maintaining a steady 8-hour-a-day, 5-day-a-week pace.

As big and rugged as the D9 is, it is also easy to operate. Here are some reasons why:

- **Hydraulic boosters provide power steering *and* braking.**
- **Long 7-roller track frame improves stability, flotation and ride.**
- **"In-seat" starting with single lever control insures fast starts in any weather.**
- **Adjustable seat, all-round visibility and easy access to all controls make the operator's job simpler.**

All in all, from its completely new 286 HP Caterpillar Engine to its tough "water-quenched" track shoes for longer wear, the D9 is built to set new production standards in the woods. The first track-type tractor with a turbocharger, it is available with torque converter or direct oil clutch drive, so you can match the drive to your job needs. Ask your Caterpillar Dealer to show you how it can step up your production!

Caterpillar Tractor Co., San Francisco, Cal.; Peoria, Ill., U.S.A.

CATERPILLAR*

*Caterpillar and Cat are Registered Trademarks of Caterpillar Tractor Co.

D9—NEW KING OF THE CRAWLERS

FACTORY AND HOME OFFICE: SEATTLE, U. S. A. DISTRIBUTORS IN THE UNITED STATES AND MOST FOREIGN COUNTRIES

• Two top logging executives in British Columbia resigned from their positions during the past month—J. C. Sheasgreen from Canadian Western Lumber Co. and Crown Zellerbach Canada, and George Percy from Alaska Pine & Cellulose Ltd.

Jimmy Sheasgreen, one of the best known logging operators in the Pacific northwest and a former president of the Pacific Logging Congress, had been manager of Comox Logging & Railway Co. for many years prior to the merger of its parent company, Canadian Western, with C-Z, and he continued to be an executive in the logging division after the merger. He will continue to serve the company in a consulting capacity.

George Percy, a second-generation logger, grew up in the west coast woods and was superintendent of Western Forest Industries logging operations on Vancouver Island before going to head office in Vancouver of Alaska Pine & Cellulose, the parent company, as log production manager. Mr. Percy will continue active in the industry.

• Alaska Pine & Cellulose Limited, Vancouver, B. C. has opened an office in New York, under the name of Alaska Pine Lumber Sales Inc., at 161 East 42nd St. Manager is Alan P. McCririck, who has had many years experience in the company's plants in British Columbia. He will be assisted by Wilfred O. DeCaigny, previously in the lumber sales division at Vancouver, B.C.

• The United States Plywood Corp., has announced that it will spend $20,000,000 during the next two years in expanding its plants and in the purchase of timber. This statement was made in connection with an announcement of the sale of $15,000,000 worth of debentures.

• Simpson Logging Company, Shelton, Wash., was awarded first place in a Pacific Northwest advertising competition this month for its acoustical products campaign.

• Charles R. Allen, formerly with J. J. Moore & Co., Inc., San Francisco, Calif., has been appointed Representative for the Export Dept. of Georgia-Pacific Corp., Portland, Ore. Allen, widely known in the export lumber business, will continue to make his headquarters in San Francisco.

• Albert W. Grant, sales manager of the Burnt River Lumber Co., Baker, Ore., died suddenly from a heart attack May 8. He joined the Burnt River organization in 1945.

• The Georgia-Pacific Corp., has taken an option to buy the majority stock of the Hammond Lumber Co., that has been held by the A. B. Hammond Co., a holding company. The price was $310 per share. Other Hammond stockholders have been made the same offer. There are approximately 256,400 shares outstanding. Hammond Lumber Co.'s big mill is at Samoa, Calif. It has other mills, extensive timber holdings, twenty retail yards and remanufacturing plants. The company's head office has been in San Francisco. Georgia-Pacific Corp., was until recently known as the Georgia-Pacific Plywood Co.

Late Forest Industries News

• Jack L. Bopp, former vice pres. in charge of production, Pack River Lumber Co., Sandpoint, Idaho, has been named assistant general manager of the firm, according to Pres. J. M. Brown, Jr. He retains his position as vice president.

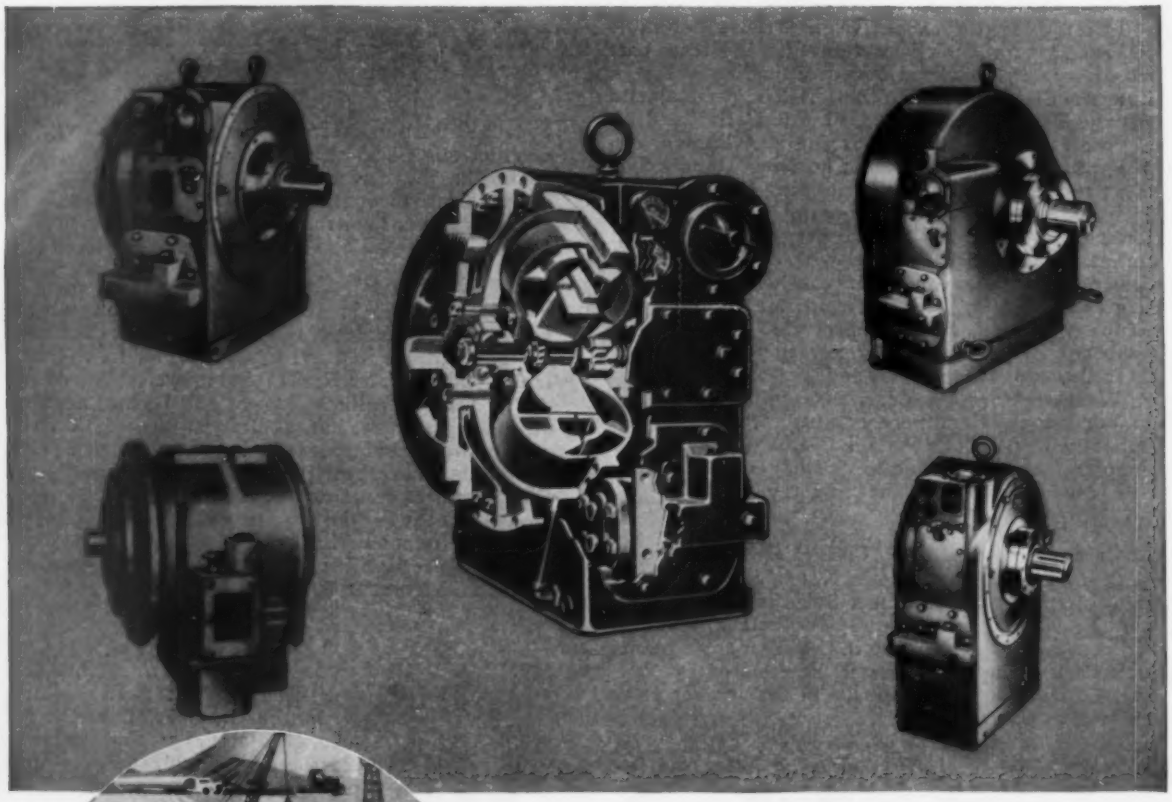
• Chief Justice Gordon Sloan, conducting an investigation of British Columbia's forest industry, has decided not to "invite" the former minister of lands and forests, Robert Sommers, to give evidence. Gordon Gibson, logger and former member of the legislature, had at first suggested that the ex-minister be subpoenaed to appear, but later withdrew this. The chief justice said he did not think that Sommers could add anything of value to testimony already given by members of the Forest Service. Sommers had resigned under fire after charges were levelled against him over issuance of forest management licenses.

• Melvin W. Prawitz, formerly with Dant & Russell, Inc., is now with the Lumber Division of Georgia-Pacific Corporation, Portland, Oregon. In his new position his headquarters will be in the Portland office where his duties will be with lumber sales work. Mr. Prawitz' career has been entirely in the lumber industry, having worked with the Pacific Lumber Inspection Bureau prior to entering into lumber sales.

• Named to 1956-57 officer posts in Redwood Region Logging Conference last month at Ukiah, Calif., are T. A. Carlson, Pacific Lumber Co., Scotia, president; George E. Stoodley, Pacific Coast Co., Willits, vice president; Emanuel Fritz, Berkeley, re-elected secretary-manager; Fred Landenberger, Eureka, assistant secretary. Two new directors are Walker Tiller of Masonite, Ukiah, and Gene Pickett, Wolf Creek Logging Co., Orick.

• Sheathing grade plywood and particle board will soon be added to British Columbia's forest industry production. MacMillan & Bloedel's $2,000,000 sheathing board mill being built at the Canadian White Pine division, Vancouver, will soon be in operation, and S. M. Simpson, Ltd., which has been manufacturing lumber at Kelowna in the Okanagan valley for many years, is building a sheathing plant to be in production early next year.

The Simpson organization, which has now divorced itself from the retail business to concentrate on manufacturing, is also building a particle board plant, the two units to cost about $2,000,000. In addition, Crestbrook Lumber Co. at Cranbrook is planning a particle board plant as part of its modernization program.



For your power need, *whatever it is,* there's a "right" TORCON Model

With a horsepower range from 15 to 600, and fly-wheel diameters from 11 to 26 inches, Torcon has a model that's right for your need — a standard unit available immediately for original equipment or for field installation.

Your real benefits begin after Torcon is installed—

- **more work and less wear: Torcon blade design balances engine efficiency and horsepower through the working range—smooth, shockless power that reduces wear, prolongs life**
- **integral unit includes oil pump, sump, pressure regulator; much better efficiency with minimum maintenance**

Are you constantly on the look-out for ways to get more efficient power at less cost? Talk to Clark—on all problems of power transmission, from flywheel to point of torque application. You'll find, as do many leading equipment manufacturers, that it's "good business to do business with Clark".

SEND FOR THIS TORCON BULLETIN

—a concise, helpful statement on how Torcon installations cut operating costs, prolong equipment life.

CLARK® EQUIPMENT

CLARK EQUIPMENT COMPANY, Transmission Division

Falahee Road • Jackson 8, Michigan

Other Products of the Clark Automotive Division . . . TRANSMISSIONS • AXLE HOUSINGS • TRACTOR UNITS • TORCON TORQUE CONVERTERS • ELECTRIC STEEL CASTINGS • GEARS and FORGINGS • FRONT and REAR AXLES for TRUCKS, BUSES and OFF-HIGHWAY EQUIPMENT.

BIG WORK CAPACITY — 30-ton HC-98 truck-crane, owned by Pilot Rock Lumber Co., Pilot Rock, Oregon, can handle a 2700 board foot log without setting outriggers . . . loads out an average of 125,000 board feet per day.

POWER HYDRAULIC CONTROLS provide fast, safe, smooth and positive response . . . minimize operator fatigue, help 1-yard LS-98 increase output for Wilson & Sutton Logging Co., Ariel, Washington.

INDEPENDENT SWING AND TRAVEL, an optional feature, saves moving boom, speeds operations. J. I. Morgan, New Meadows, Idaho, owns three Link-Belt Speeder loaders, says, "They're dandies."

HIGH MOBILITY, VERSATILITY — 1-yd. LS-98 shovel constructs access roads in Oregon. Self-cleaning tracks reduce maintenance despite rough going. Power steer makes travel easier.

HOW TO SPEED LOG LOADING!

Put a Link-Belt Speeder on the job and get all these advantages--

No other line of log loaders gives you as much power in terms of actual line pull and log-loading speed — so important in single-line work. In addition, only Link-Belt Speeder offers a combination of anti-friction bearings, splined shafts, precision-machined parts and gears at every important power transmittal point — *plus* extra strength and heft of top-quality components.

A Link-Belt Speeder works so swiftly that you've got to see it to believe it. With Speed-o-Matic—the only *true power* hydraulic control system in the industry—operation is fast, accurate, safe and easy. In log loading, for example, Speed-o-Matic is so good that owner after owner has reported a 10 to 25 per cent increase in production over previously used machines.

But don't take our word for it. See a Link-Belt Speeder in action. Your distributor will be glad to arrange for an on-the-job demonstration. See him now or write today. Every day you hesitate is costing you big money. Link-Belt Speeder Corporation, Cedar Rapids, Iowa. 14.053

LINK-BELT SPEEDER

Builder of a complete line of crawler and rubber-tired shovel-cranes

Your Factory-Trained Sales and Service Specialists

NELSON EQUIPMENT CO., Portland, Oregon

HOWARD-COOPER CORP., Seattle, Wash.

WESTERN MACHINERY CO., Spokane, Wash.

WESTERN EQUIPMENT CO., Boise, Idaho

EDWARD R. BACON CO., San Francisco, Sacramento, Oakland, Fresno, Calif.

MONTANA POWDER & EQUIP. CO., Helena, Billings, Mont.

PURVES RITCHIE LIMITED, Vancouver, B.C.

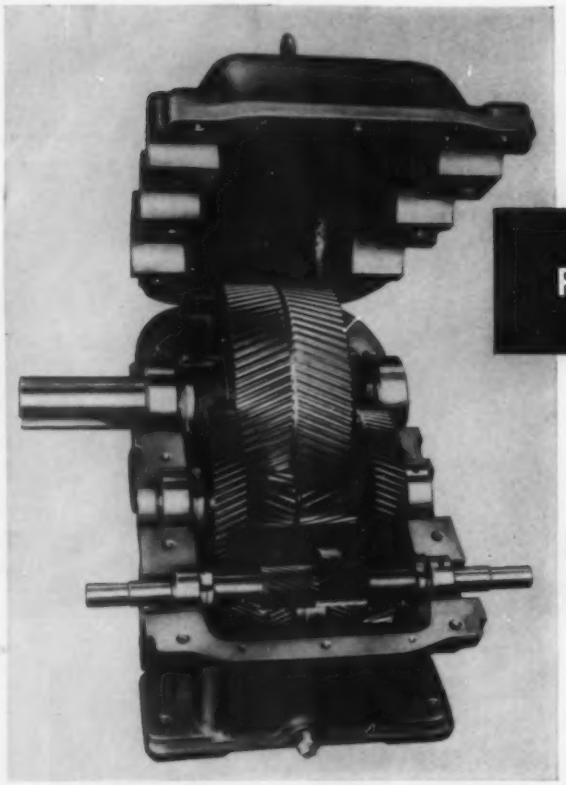


Photo shows triple reduction speed reducer, typical of Western Gear's high quality design and construction.

POWER TRANSMISSION TIPS

How To Use Service Factors Correctly In Selecting Gear Units

By Glenn Jorn

Industry Specialist-Forest Products, Western Gear Corporation

Experience in the gear industry has led to the adoption of a rule of thumb:

"The life of a gear unit increases in proportion to the cube of the service factor."

To illustrate this we have shown in the table below how much additional life can be gained with a small increase in service factor.

Original S. F.	Increased S. F.	Resulting Increased Life
1.0	1.25	Nearly Doubled
1.25	1.50	1.73
1.50	1.75	1.58
1.0	2.0	8.0

The first example in the table shows that you can nearly double the expected life of a gear unit by increasing your service factor from 1.0 to 1.25. The cube of 1.0 is still 1.0 and the cube of 1.25 is 1.95. The increased life shown in the last column is obtained with a very small increase in first cost.

Catalog HP ratings are for 8 to 10 hours' service per day under uniform loads. Manufacturers' catalogs show tables that classify your load and recommend service factors for most standard applications. If there is anything about your application that is unusual, or if downtime would be unusually costly, a more thorough study of service factors is warranted.

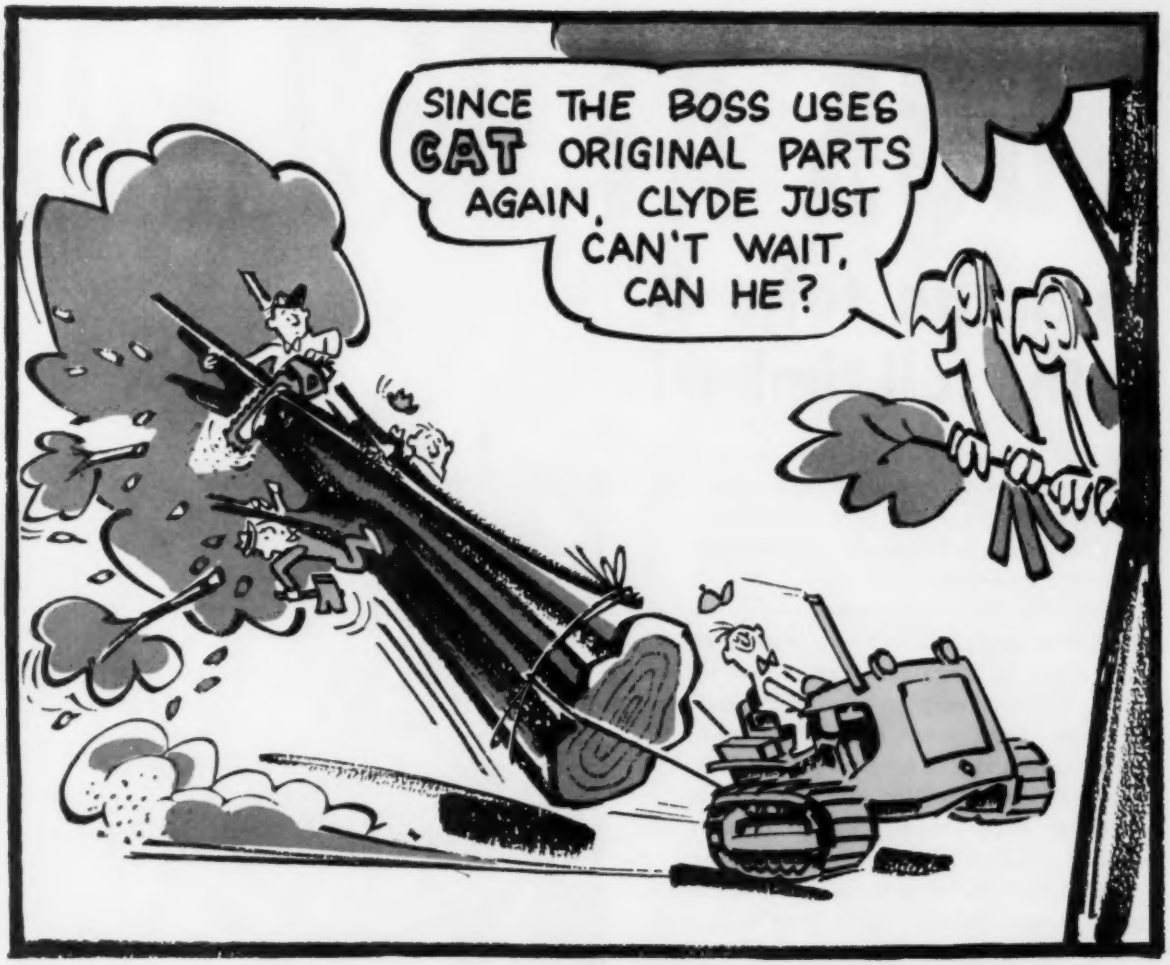
Gear units are designed to handle *momentary* overloads up to double the catalog rating without failing. The thermal rating is the load that the gear unit can continuously transmit under normal ambient conditions without overheating. The thermal rating should equal or exceed the HP transmitted before applying any service factor.

In well organized lumber, pulp and paper industries, shutdown periods are planned and scheduled beforehand. An unscheduled shutdown resulting from gear failure can be extremely costly in lost production, time and dollars. It can even become a safety hazard. Extra service factor is the least expensive insurance obtainable against such failures and loss.

A test stand is used only intermittently and may become obsolete in a few years. For this application strength is more important than wear, and a minimum service factor may be adequate. One precaution – if it is a variable speed test stand, be sure to size your components on the maximum torque condition and specify your maximum speed.

If every 0.1% efficiency is of great importance, remember that heavily loaded gear units are generally more efficient than lightly loaded gear units. This may call for a decrease in service factor.

Take advantage of the services of your Western Gear application engineer. He can make available to you experience accumulated since 1888 by Western Gear, a leader in the field of design and manufacture of mechanical power transmission equipment. A complete line of speed reducers is offered in all shaft arrangements, horsepowers and ratios to solve your gear drive problem efficiently and economically. Write on your letterhead for Bulletin 5402 which gives details and engineering data. Address General Offices, Western Gear Corporation, P.O. Box 182, Lynwood, California.



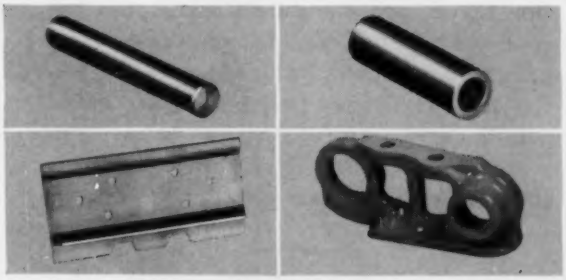
When it comes to parts, don't let "look-alike" substitutes get you off the track.

Genuine Caterpillar track shoes are made of only high-quality rolled steel, specially hardened by an exclusive process. Links are induction-hardened, pretested steel, and their design is the result of years of research and development. CAT* track pins and bushings are also specially hardened, with a deep case and a tough core. You're *sure* you're on the right track with Cat original parts.

With substitute parts, can you be sure of anything?

Better see your Caterpillar Dealer's Parts Representative—and get Cat original parts every time.

Caterpillar Tractor Co., San Francisco, Calif.; Peoria, Illinois, U.S.A.



Caterpillar track parts take the brunt of the punishment when the going is toughest. They are subjected to abrasive sand and gravel, brutal shock loads from stumps and rocks. Why take chances with substitutes?

CATERPILLAR*

*Caterpillar and Cat are Registered Trademarks of Caterpillar Tractor Co.

LOOK AT REO FOR

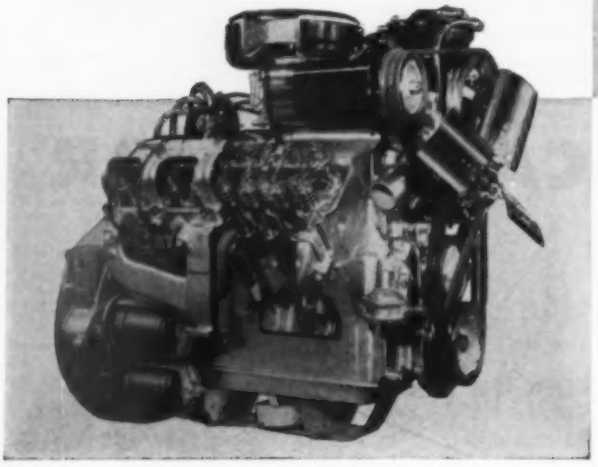
that can take it in the tall timber!

Reos load to the last pole and have the speed to make more trips per day. Log-haulers have found that Reos are *faster and more economical* than any other trucks in the woods—*and they stay out of the shop longer, too!*

Reo "Big Vs", with their amazing 220 hp Gold Comet engines, have the extra power essential for logging operations. Power that makes hauling full loads easy on hilly, twisty, lumbering roads. Extra power too, for the speed to make more round trips for extra profits. And Reo owner reports show Reo operators averaging nearly *twice* the gas mileage received from trucks of other makes on the same job.

From their double side-rail frame construction to their wide, heavy-duty front axles, rugged Reo tandems are 100% truck-built. Reo Gold Comet engines are all-truck built, too, and are backed by *100,000 mile or 1 year warranty* . . . your assurance of performance on *your* job. Reo on or off-highway tandems range to 78,000 pounds GCW.

See your Reo Branch or Distributor today about an on-the-job demonstration.



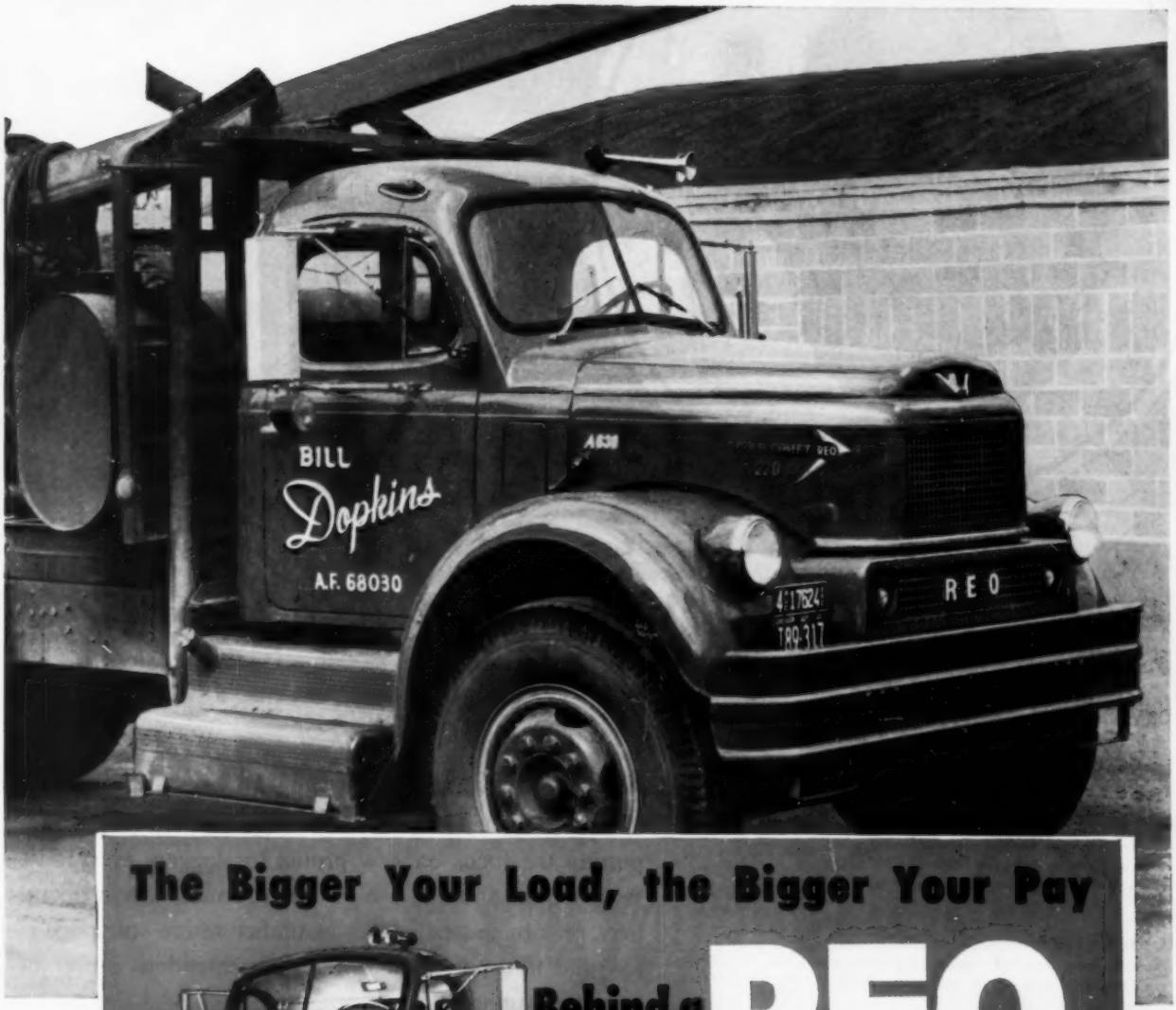
Reo Short-Stroke, Wet-Sleeve Gold Comet engines from 100 hp Six to 220 hp V-8—Gas or LP-Gas . . . up to 35% more efficient than the industry average. Also, 175 hp Cummins Turbodiesels.

REO MOTORS, INC.

LANSING 20, MICHIGAN • TORONTO, ONTARIO

SUBSIDIARY OF **BOHN** ALUMINUM AND BRASS CORPORATION

RUGGED TANDEMS

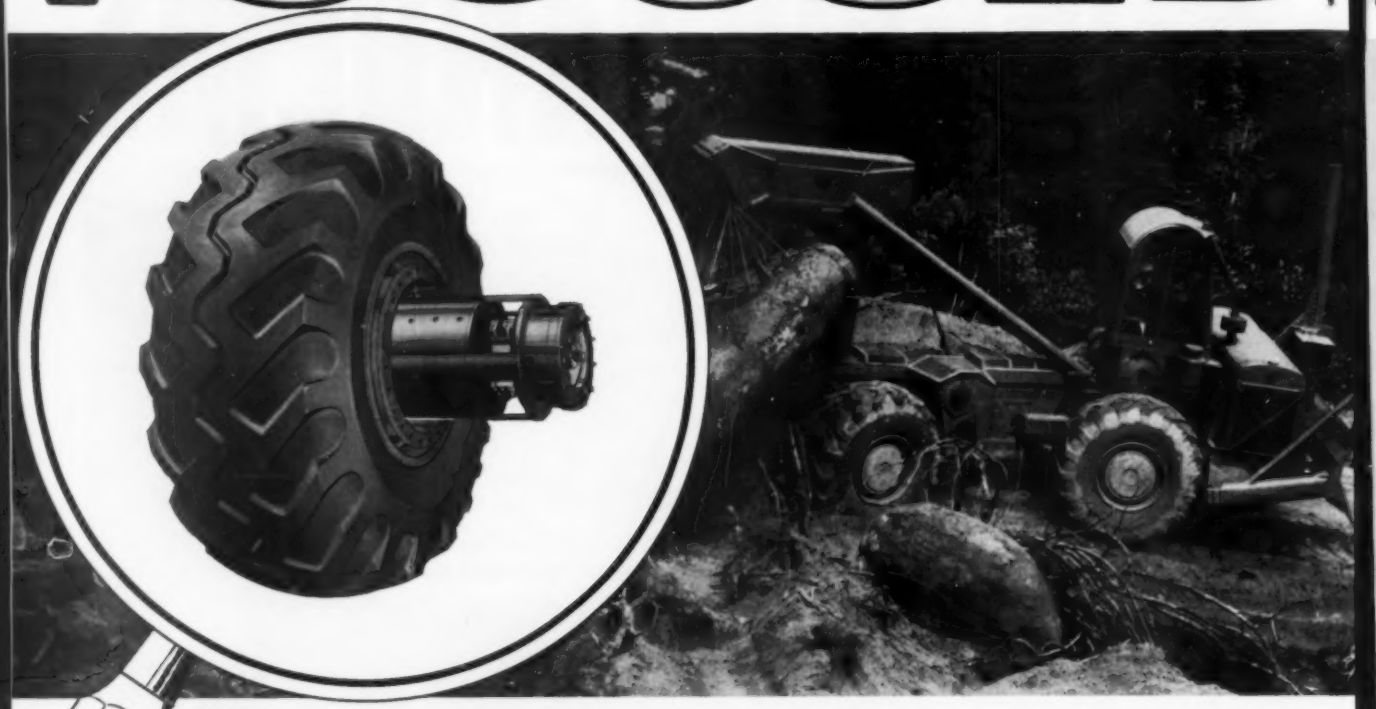


The Bigger Your Load, the Bigger Your Pay

Behind a REO "BIG V"

"Payload-Engineered" Trucks and Tractors

FOCUSED



For Loggers...

LE TOURNEAU ELECTRIC ARCH

Turns Problems Into PROFITS!

HOW LeTOURNEAU ELECTRIC WHEELS WORK FOR LOGGERS

EVERY WHEEL DRIVES. DC electric motor and gear reduction built inside the wheel puts power under the load. Oscillating axle keeps all wheels driving over rough terrain.

ALL WHEELS STEER. Powerful LeTourneau Gear-motors steer front and rear wheels for full maneuverability, quick turn-arounds at landings.

POWER SELECTION INFINITE. Easy-operating, rheostat-type control gives infinite gradations of power when you want it, where you want it.

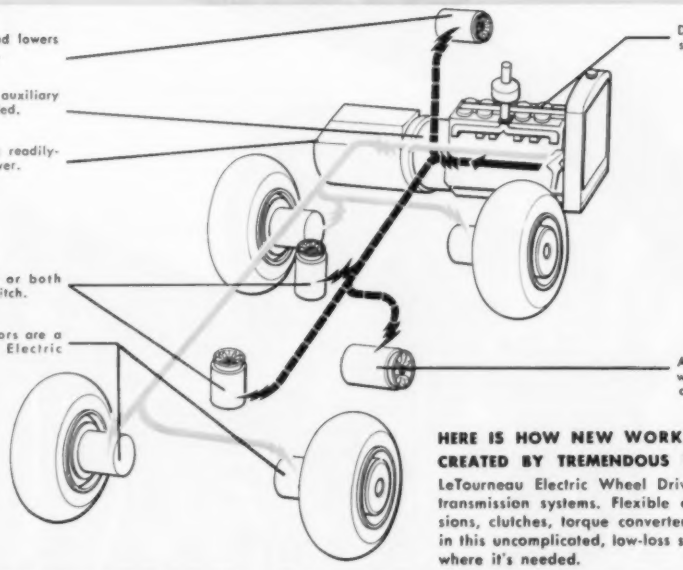
ELECTRIC "NO-WEAR" BRAKING. Regenerative electric braking system *automatically* holds Arch and skid-load at safe speed, instantly selected or changed by operator. No "gearing down" or friction braking.

POWER FOR PRODUCTION! In the critical distance up to 3 miles from landings, LeTourneau Electric Arches are putting the focus on new profits for loggers every day. Whether the show is a big-volume, small-margin operation, or a by-passed pocket of timber where stumpage is low and transport is high . . . the tremendous *power* of these logging locomotives *produces!*

If it's volume you're after, choke up 7,000 board feet (28 tons) per turn behind an Electric Arch . . . then watch it highball to the landing while your small tractors bunch its next load.

Or if you own a patch of timber that doesn't justify a road — maybe in an area where you can't go with trucks or can't afford to go with "tracks" — here's power for climbing a dozed-out trail up the mountain, combined with rubber-tired speed to clean up the job in money-making time.

ELECTRIC POWER


Motor power raises and lowers special logging blade.
AC generator provides auxiliary power where it's needed.
DC generator supplies readily-controlled driving power.
Motors steer either or both axles at touch of a switch.
Powerful drive motors are a part of ALL FOUR Electric Wheels.
Diesel engine is prime power source.
All the line-pull you can use, with exceptionally high-torque on the winch.

HERE IS HOW NEW WORK AND TRAVEL ABILITY ARE CREATED BY TREMENDOUS POWER — DIRECTLY APPLIED

LeTourneau Electric Wheel Drive eliminates mechanical power transmission systems. Flexible electric cables replace transmissions, clutches, torque converters, drive shafts, and final drives in this uncomplicated, low-loss system that "spots" engine power where it's needed.

Saves Big Money on Road Costs

No matter what you're logging, if you have a LeTourneau Electric Arch you'll find your road construction and maintenance costs are lower than you ever thought possible, and all the while your volume of board feet delivered continues high or rises.

That's money in the bank for any logger! And it's made possible by the proved principle of power application whose heart is the LeTourneau Electric Wheel. Direct-geared DC motors inside the rims put driving power *under the load* for swinging big turns . . . individually-powered wheels operate as a team when churning through mud or over obstacles . . . extra-wide, man-high tires spread weight over a big area for more flotation and traction, less penetration . . . actually compact soft roads or trails.

Locally-placed electric motors also focus power directly on the massive winch drum for the quickest, easiest yarding ever . . . focus power directly on both front and rear axles for effortless steering. Here's a machine where the operator puts *all* his effort into *managing*. Focused electric power does the work.

If you're looking for more profitable opportunities in logging, look first at the LeTourneau Electric Arch and you'll see how you can make your own opportunities now, on your present shows — and at the same time be ready for your next operation, no matter where, with Focused Power for Production!

LETOURNEAU LET EQUIPMENT

R.G. LETOURNEAU INC

General Offices: LONGVIEW, TEXAS

Your LeTourneau Distributor will be glad to arrange for you to see an Electric Arch at work. Call or write:

LOGGERS & MILL SUPPLY CO.
Highway 299
Arcata, California

PAUL DROSCHER SALES
2541 Angelo Avenue
Redding, California

NELSON EQUIPMENT CO.
5251 S. E. McLoughlin Blvd.
Portland 2, Oregon

LOGAN MAYHEW LTD.
425 Howe Street
Vancouver, B. C.

TOTEM EQUIPMENT CO.
3706 Airport Way
Seattle 4, Washington
E. 525 Trent
Spokane, Washington

If you are not served by one of the Distributors listed, get full information on LeTourneau Electric Arch by mailing coupon.

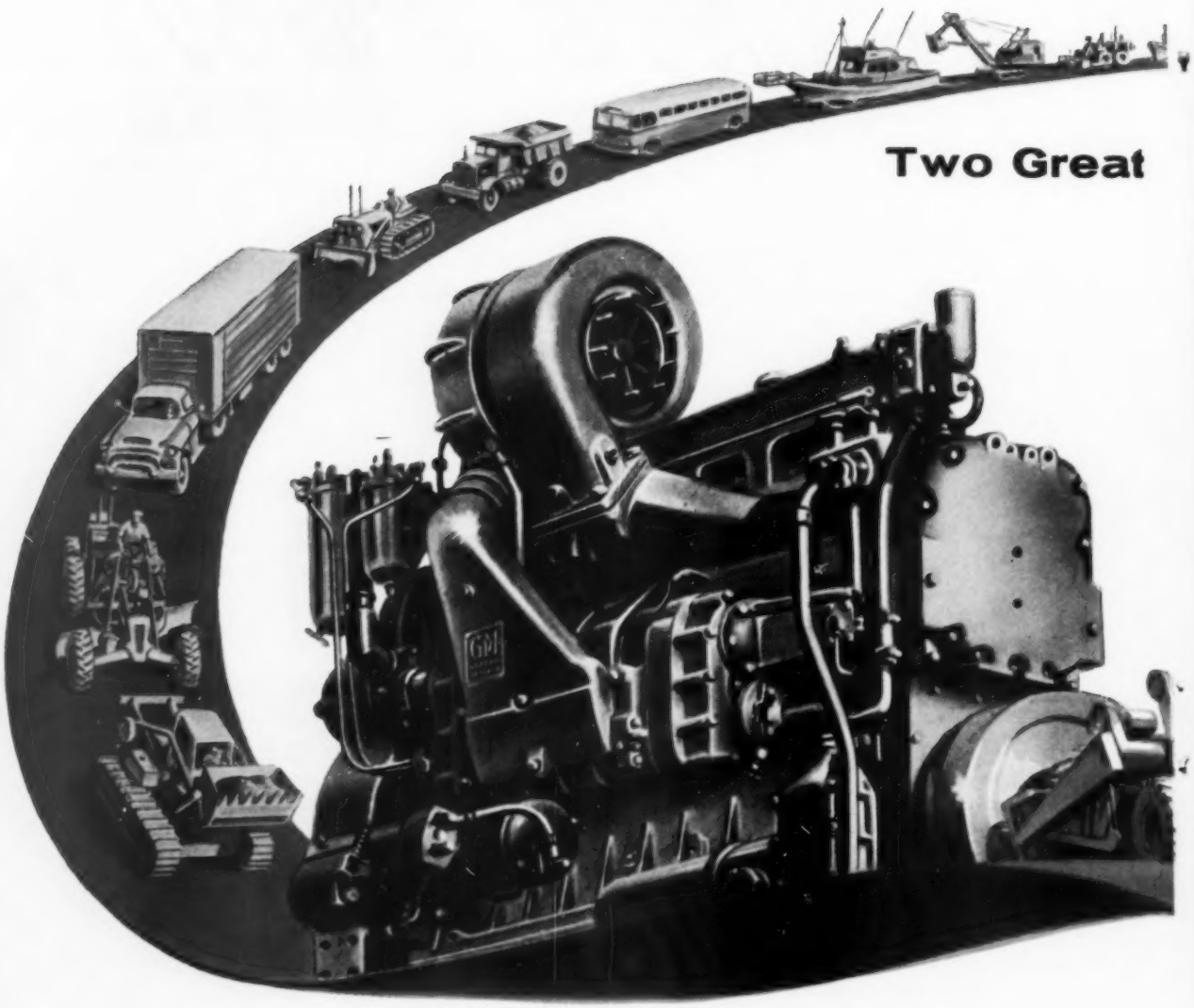
R. G. LeTOURNEAU, INC.
2547 South MacArthur, Longview, Texas
Tell me more about the Logging Arch. DL-121

NAME _____ TITLE _____

COMPANY _____

ADDRESS _____

CITY _____ STATE/PROVINCE _____ COUNTRY _____



Two Great

Increased Power—Decreased Fuel

Here's exciting news for power users—great new 4- and 6-cylinder GM Detroit Diesel engines that represent another long forward step by the leader in the Diesel engine field. With this new, more efficient Detroit Diesel Turbopower you can have up to 17% more power with no increase in fuel consumption—or the same power output with fuel saving up to 15%.

Detroit Diesel engineers have Turbocharged 2-cycle Diesels by combining an exhaust-driven turbine with the engine blower to deliver a larger supply of fresh air to the cylinders. Result: improved combustion, freer engine breathing, quieter and more efficient performance in the higher speed ranges.

Turbopower Diesels are additions to Detroit Diesel's time-proved Series 71 line, world's most widely used Diesel engines. The four-cylinder Turbopower Diesel delivers 171 H.P. at 2300 R.P.M.; the six-cylinder engine produces 280 H.P. at 2300 R.P.M.

To truckers Turbopower means speedier, more economical movement of big payloads.

To boatmen it means faster speed or longer cruising range—more room for cargo.

To contractors and other industrial users it means greater work output from higher-powered engines or improved economy.

For the full story of 2-cycle Turbopower, write us or call your nearest GM Detroit Diesel Distributor or Dealer.

AMERICA'S LARGEST BUILDER OF DIESEL ENGINES

New Engines Added

to General Motors 2-cycle Diesel Line

Detroit Diesel Turbopower

FOR EXTRA HEAVY LOADS ON PRIVATE ROADS...

GET Firestone NYLON TIRES

Hauling giant loads on private roads calls for the extra tire strength built into Firestone Nylon Logging tires.

Firestone Nylon Logging tires are job-engineered to get the biggest load out over private roads without the profit-killing downtime that results from tire failures.

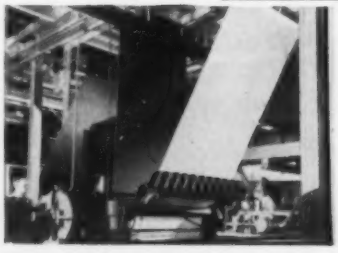
The treads on Firestone Nylon tires are extra deep to give more traction. Extra nylon tread plies give maximum protection against impact breaks. Double-thick sidewalls give added protection against cuts and snags.

Get rugged Firestone Nylon tires for extra heavy loads on private roads and for the regular loads of public highway trucks. You'll find they will cut tire costs with longer service and less downtime.

WHEN ORDERING NEW EQUIPMENT, SPECIFY FIRESTONE

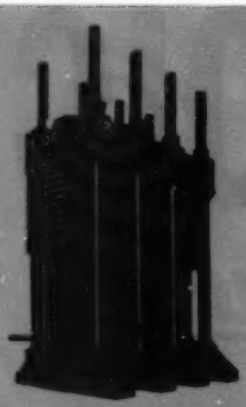
STRONGEST TRUCK TIRES EVER BUILT

A new multi-million dollar Firestone factory combines the famous Firestone Gum-Dipping process with Safety-Tensioning, a new Firestone process which takes the stretch out of truck tire cords. Firestone Safety-Tensioned *Gum-Dipped* cord bodies eliminate tire growth and tread cracking, resist impact breaks, give longer tire life and more money-saving retreads.



Enjoy the Voice of Firestone on radio or television every Monday evening over ABC

Copyright 1956, The Firestone Tire & Rubber Co.



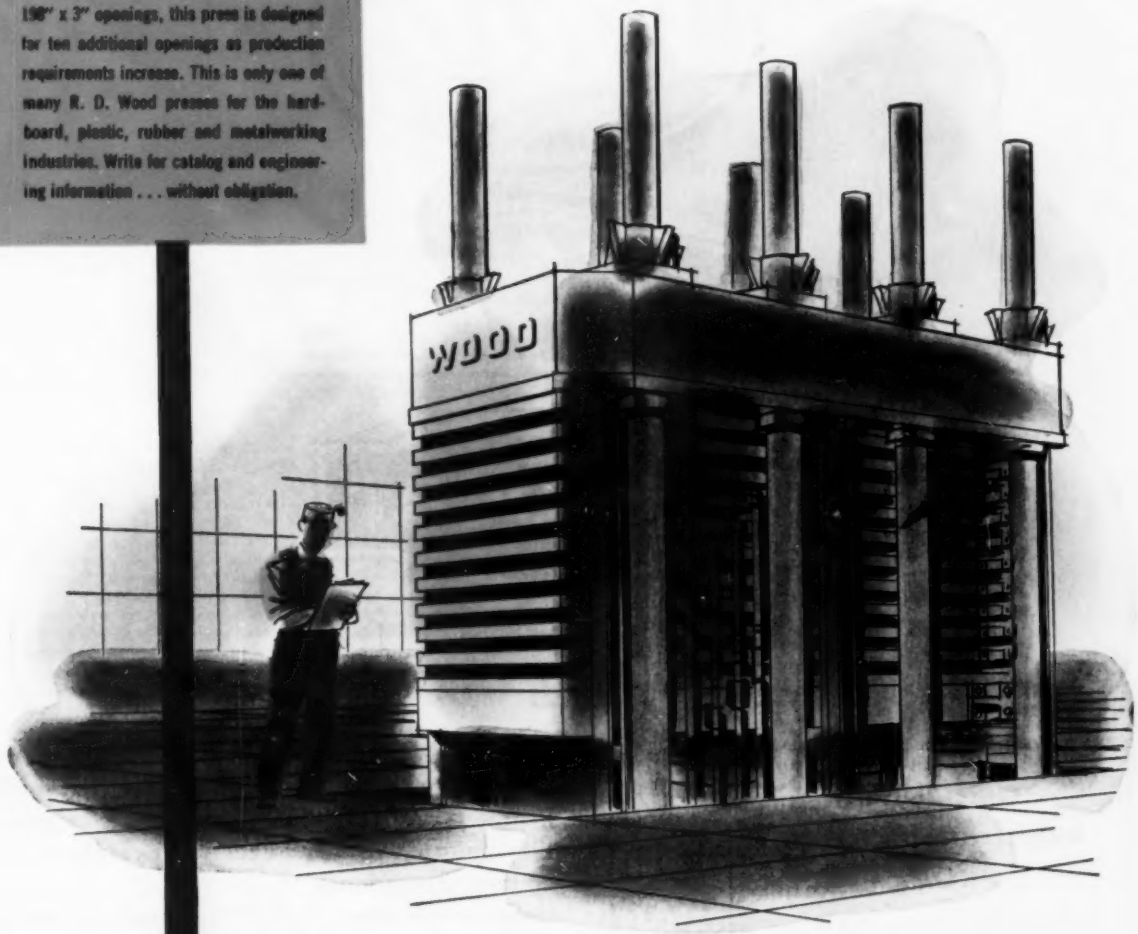
3,675-ton Self-contained Multiple Opening Platen Press for the manufacture of wet process hardboard. Built with ten 54" x 196" x 3" openings, this press is designed for ten additional openings as production requirements increase. This is only one of many R. D. Wood presses for the hardboard, plastic, rubber and metalworking industries. Write for catalog and engineering information . . . without obligation.

Twice the price won't buy a finer press

Watch an R. D. Wood press at work and you'll see why.

Here is *dependable performance*—smooth, precise operation; high production; minimum downtime for maintenance.

And here, too, is long, trouble-free service. Reason: every R. D. Wood press is the product of meticulous design, excellent materials, superior craftsmanship. We build our presses *to be best*—and nothing less. You can't buy a finer press—even at twice the price!



R. D. WOOD COMPANY

PUBLIC LEDGER BUILDING • PHILADELPHIA 5, PENNSYLVANIA

Representatives in Principal Cities

MAKERS OF HYDRAULIC PRESSES AND VALVES • FIRE HYDRANTS • CAST-IRON PIPE • GATE VALVES • GAS PRODUCERS • ACCUMULATORS

FIRST CHOICE

on the Pacific Coast!*

BY FAR THE BEST—FOR ALL THE WEST

***Official Truck Registration Records PROVE—**

In 1955, in the 26,000 lb. G.V.W. and over class, more White products were registered throughout the Pacific Coast States—California, Oregon and Washington—*than any other make!*

Sound reasons explain White product's ever-increasing popularity with Western truck operators. Their lightweight construction—the big White "plus"—permit greater payload ... give White undisputed advantages for over-the-road as well as off-highway operations.

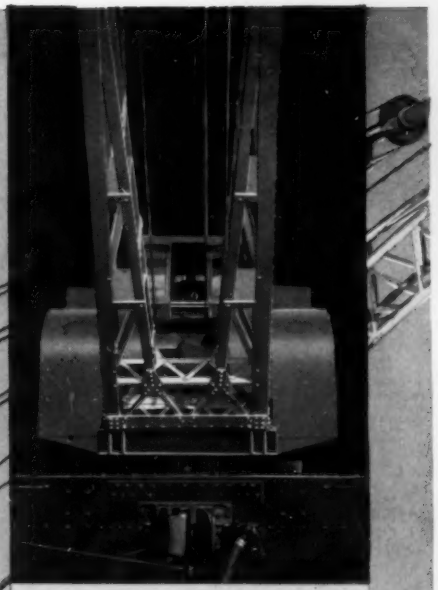
Today, *throughout the West,* more White products are used in the logging industry than any other truck. In other industries, too, where payload and profit go hand in hand, truck operators are going the White way. See how White can serve *you* best. Call your local White Representative today.

THE WHITE MOTOR COMPANY
CLEVELAND 1, OHIO
Factory Branches, Distributors & Dealers Everywhere

FOR MORE THAN 55 YEARS THE GREATEST NAME IN TRUCKS

FASTER and SAFER crane operation

with BROWNHOIST patented monitor type cab and clear vision boom



This view from below shows you the great visibility right through the middle of the Clear Vision Boom.

Windows on all sides of the raised Monitor Type Cab of a Brownhoist Locomotive Crane give the operator a full view of the area in which he is working, and the open type Clear Vision Boom lets him look right down at the work itself. This complete 360° visibility—to the sides, to the rear, and forward into the car—allows the operator to work more rapidly, without unnecessary crane swinging, and also increases safety by eliminating blind spots. The patented Monitor Type Cab has a door on each side, and all doors and windows can be opened for ventilation. A soundproof partition separates the operator from the engine and controls are placed within convenient reach of his adjustable seat. These factors assure ease of operation of the Brownhoist Locomotive Crane, and Brownhoist engineering assures maximum performance. Anti-friction bearings are used throughout including machinery side frames. The boom hoist is worm driven for smooth, safe operation. Dynamatic clutches disconnect all upperworks when travelling . . . give sure, positive control. High strength alloy steels bulwark the machine for heavy service. Throughout, Brownhoist Locomotive Cranes are designed and built for high capacity production. For further information write today for Catalog No. 548.

Approximate visibility from ordinary cab.

Approximate visibility from side-operated cab.

360° visibility from I. B. patented Monitor Type Cab.

Your operator can see exactly what he's working with in the car in front of him. Greater safety is the result.

188

BROWNHOIST MATERIALS HANDLING EQUIPMENT GIVES A LIFT TO AMERICAN INDUSTRY

INDUSTRIAL BROWNHOIST CORPORATION
BAY CITY, MICHIGAN • DISTRICT OFFICES: New York, Philadelphia, Washington, Cleveland, Chicago, San Francisco, Montreal • AGENCIES: Detroit, Birmingham, Houston

SUBSIDIARY OF Penn-Texas

BROWNHOIST

an ACCO product

American Cable TRU-LAY VHS | 15% STRONGER

Cut costs 3 ways with New VHS Choker and Arch Lines

Loggers are finding that by using chokers and arch lines of new VHS Wire Rope they can make important savings in at least three ways.

1·Easier Handling—Made from a new grade of steel for wire rope, VHS is at least 15% stronger than Improved Plow Steel—the strongest grade available before VHS. This extra strength often allows you to use smaller diameter lines for choker and arch lines. This means easier handling for choker setters. And ACCO's Patented Dualoc endings on chokers further increase this ease of handling.

2·Longer Life—New VHS is not only stronger, it's also tougher . . . more wear resistant. Developed specifically for use in logging chokers and arch lines, it stands up better in these tough services . . . gives much longer life.

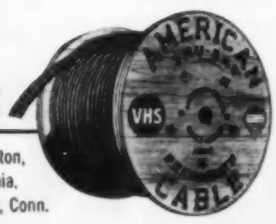
3·Cuts "Down Time"—The longer life you get with VHS arch lines and chokers makes other important savings by cutting "down time" of equipment for wire rope replacement.

At your distributor now—Your American Cable distributor has new VHS logging chokers and arch lines in stock now. Just call him and tell him the size you want—you don't need any complicated specifications.

Ask your American Cable Distributor Salesman or write to the nearest American Chain & Cable Company office listed at right for Brochure **DH-489**

ACCO

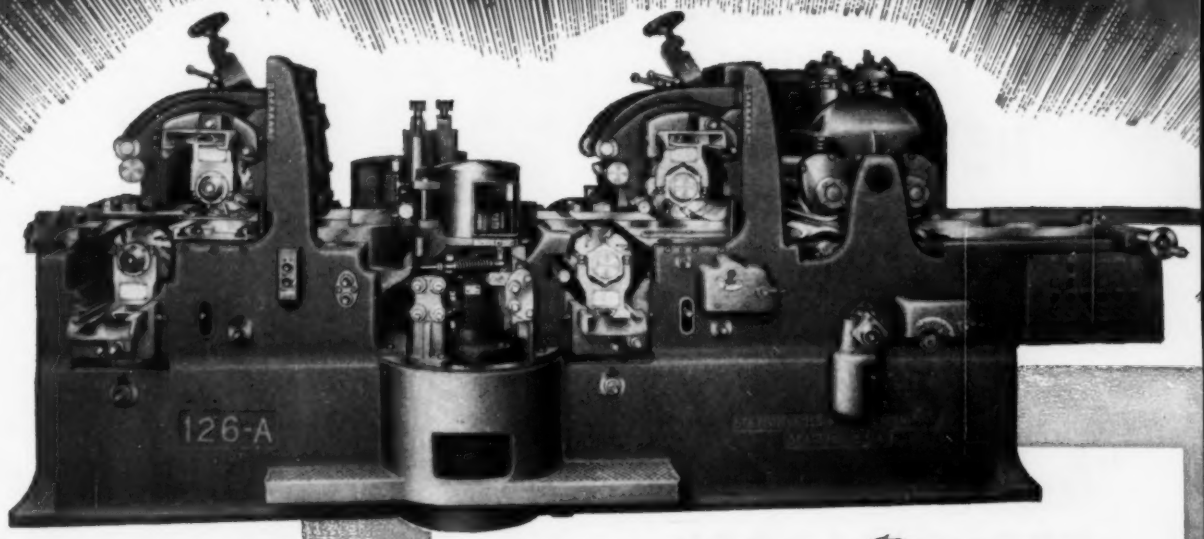
American Cable Division
AMERICAN CHAIN & CABLE



Wilkes-Barre, Pa., Atlanta, Chicago, Denver, Houston, Los Angeles, New York, Odessa, Tex., Philadelphia, Pittsburgh, Portland, Ore., San Francisco, Bridgeport, Conn.

NEW

More than a Moulder... More than a Matcher



25 to 50 HP on any top or bottom head. Extreme swing on top-heads 7¼ to 10¾ inches—on sideheads 7¼ to 10 inches. Top and bottom heads have 6-inch lateral adjustment. Two to twelve-knife heads.

STETSON ROSS

UNIVERSAL 6-HEADER

(6 x 12 inches capacity)

This cartridge type quick-change machine is a new high precision tool designed universally for plants of all sizes—

- **PLANING MILLS**
- **MOULDING PLANTS**
- **WOODWORKING PLANTS**
- **DISTRIBUTION YARDS**

With it you can run stock from *rough to finish with a single pass.* Pre-surfacing unnecessary because there are top and bottom surfacing units ahead of edge and pattern cutters.

You can reduce down-time and lower production costs because all 4 top and bottom heads are "cartridge" quick-change type.

The new 126-A will do the job of 2 or 3 high production moulders of standard design. If yours is a small plant, it will serve as a universal moulder-matcher. If yours is a large plant, it will do a superb job as a re-run or panelling machine.

Here is a universal moulder-matcher that will pay for itself in a short time and enable you to meet today's competitive market.

Get the facts—write us or phone Seattle MAin 4188.

STETSON-ROSS MACHINE COMPANY INC.

SEATTLE 4, WASHINGTON

EXPORT DIVISION: 301 CLAY STREET, SAN FRANCISCO 11, CALIFORNIA

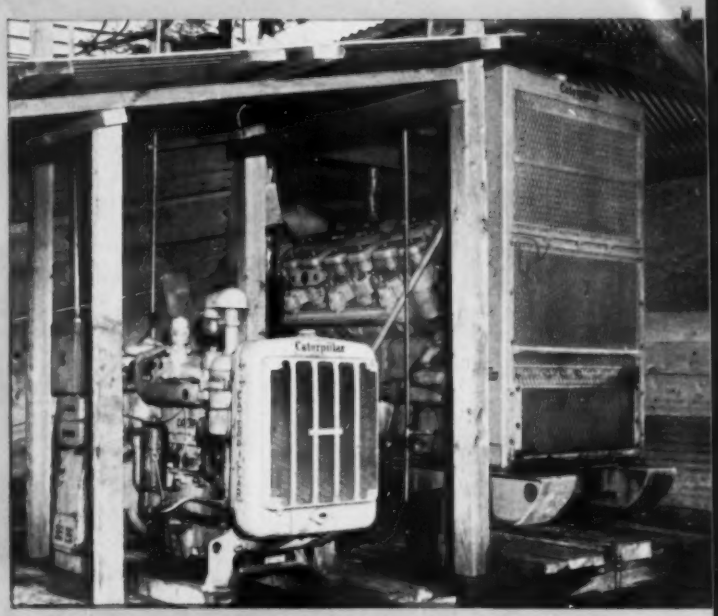
VETERAN D311

26,540 HOURS

NEW D397

4500 HOURS

BOTH DO "A PERFECT JOB" FOR GALLACCI LUMBER CO.



These two Cat Diesel Electric Sets power the Gallacci Lumber Co. sawmill, which has a capacity of 50,000 bd. ft. an 8-hour day. Logging redwood and fir on a 2000-acre tract, the company also uses two D8 Caterpillar Diesel Tractors, a D7 and a No. 6 Traxcavator.

Since May, 1954, two CAT* Electric Sets have provided *all* the power for the Gallacci Lumber Co. mill, 39 miles west of Cloverdale, Calif. Sawing 40% redwood and 60% fir, the mill has a capacity of 50,000 bd. ft. an 8-hour day. When this picture was taken, the veteran D311 had worked for 26,540 hours and the new D397 for 4500 hours. Reports on other D397s show that these heavy-duty units can be expected to run more than 20,000 hours without major repairs.

Asked about the performance of his power pair, owner Joe Gallacci said: "They're doing a perfect job—even better than I expected. In 22 years' experience in the woods, I've tried all makes of engines and tractors and have always found that Caterpillar-built equipment gives steadier production, lower maintenance and less down time."

His two sets, one old and one new, point up this fact about Caterpillar units: They're ruggedly built to deliver money-making production *from the start and for years.* What's more, at the time you buy them, you can be sure they feature the latest advances in power development. Here's why. Combining research with practical experience, Caterpillar constantly improves its products. Yet no matter how long they're in use, they never become "orphans." You can always get fast parts and service for them from your nearby Caterpillar Dealer!

To provide the *right* power for your requirements, Caterpillar offers modern heavy-duty electric sets up to 350 KW. Ask your Caterpillar Dealer to show you *proof* of their profitable performance!

Caterpillar Tractor Co., San Francisco, Calif.; Peoria, Ill., U. S. A.

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MODERN HEAVY-DUTY POWER

EXPORT DIVISION: 301 CLAY STREET, SAN FRANCISCO 11, CALIFORNIA

THE Lumberman

presents as Tall Timber.

Jack I. Morgan

JACK I. MORGAN
J. I. Morgan, Inc.,
New Meadows, Idaho

BY WAY OF THE MASTER mechanic route a man can become a top-flight logger and a state legislator, can contribute significant mechanical developments to the logging industry, distinguish himself in professional organizations, put a community on the maps and winter in Palm Springs. The accomplishments of Jack I. Morgan, president of J. I. Morgan, Inc., New Meadows, Ida., verifies these conclusions.

Although it's been as a prime logging contractor (one of two loggers keeping Boise Payette Lumber Co.'s three rather large sawmills supplied with logs the year around) that he has achieved distinction, his original industry job was in the gold dredging field. However, it might be said he really got his start in the logging field as he was born in a Nova Scotia logging camp—where his father, John Morgan, was logging superintendent of Davison Logging Co.

Incidentally, the timing of that birth could be approximated by the fact that the young man who went after a doctor in a "dinkey" (light railroad engine) at Jack's birth, retired last year after 38 years experience in woods operations— the last 10 years as Jack's employee.

After the Davison operation finished, the senior Morgan and family moved to Minnesota and later went West with other Canadians to set up Boise Payette's logging operation at Cascade just prior to World War I. John Morgan became BP's master mechanic and continued in that capacity until retiring in 1936 and moving to Pacific Coast because of ill health.

IN THE MEANTIME Jack was attending schools in Idaho and Colorado, finishing up at the University of Idaho. Subsequently he became master mechanic of a mining firm operating three gold dredges on Idaho's Salmon River.

When his father became ill, E. C. MacGregor, BP logging superintendent (father of Gordon A. MacGregor, now BP's other logging contractor), insisted that Jack take his father's place as master mechanic. He left mining and associated with BP as master mechanic, the woods headquarters at that time having recently moved from Cabarton to MacGregor. Prime woods equipment consisted of three railroad engines, 10 gas "60 Caterpillars," 10 diesel 50s and 75s, and two steam-powered slide jammers.

He remained there until 1940 when the camp moved to New Meadows where he directed the erection of a modern camp, complete with running water, electricity, sewer system and streets.

Then came the war and BP established a logging management committee in charge of woods activities. Jack Morgan became chairman of this group in 1944 and continued in this capacity until international hostilities ceased.

In 1946, ten years after affiliating with BP, he bought the company's logging equipment, townsite and headquarters. At that time BP converted over from 50-50 contract-company logging to 100 per cent contract logging.

Starting with one side, he functioned as his own master mechanic while running the contract logging operation.

SUBSEQUENT EXPANSION of the Morgan contract logging firm to from two to three sides has resulted in log production averaging 32 million feet per year since the 1946 start-up. Logging in 1954 totaled 37 million feet.

Besides distinguishing himself as a consistent, productive logger in one of the country's roughest tractor logging terrains, he built up an enviable ownership of woods machinery. Meanwhile he originated the Truckmount, a loader—truck mounted, transported and powered; and the Trackmount, a loader powered, mounted on and transported by a D8 Caterpillar;—Washington Iron Works took over the manufacture and distribution of both machines. Morgan originated a new type truck-trailer bunk stake now rather generally used for long stakes and designed his own type goose-neck loading boom, now manufacturing them in the company shop at New Meadows on order.

Morgan served as president of Intermountain Logging Conference in 1948, was program chairman 3 years, and has been a director for past 11 years and continues in this capacity. He is also a director of Pacific Logging Congress, a distinction held during the past four years.

As a state Senator from 1951 to 1955, he was strategically concerned with highway legislation and served as member of highway, forestry, mining and municipalities senate committees. While holding this elective office he introduced serveral bills—all of which were approved.

Another important event contributing to Morgan's successful career happened in 1943—he married Miss Frances Hleba, of Pittsburg, Pa., who went West to spend a summer at Boise. Together they worked out the "wintering at Palm Springs" schedule.

Tall Timber

News From the South . . .

• U. S. Gypsum Company started production of sheathing, wallboard, plaster base and plaster in its multi-million dollar New Orleans plant in April. Built on a 21-acre tract on the Intracoastal Canal with access to the Mississippi river, the plant will serve the mid-south area. H. E. Swaney is plant manager.

• E. A. Farley, retired superintendent of Southern Pine Lumber Co., Diboll, Texas, succumbed to illness during April. The deceased joined the company in 1925.

• Ten year exemption from ad valorum taxes has been granted the following companies in the lumber and paper industry fields by the Louisiana Dept. of Commerce and Industry:

Celotex Corporation, Jefferson Parish (opposite New Orleans), an amount of $1,123,105.

Continental Can Company, Jefferson Parish, $250,000.

Hill-Behan Lbr. Co., Jefferson Parish, $150,000.

Johns-Manville Product Corporation, Jefferson Parish, $1,892,521.

Forest Products Div., Olin-Mathieson Chemical Corp., Caddo Parish, an amount of $900,000.

Poulan Mfg. Co., Caddo Parish, $32,387.

Forest Products Division, Olin-Mathieson Chemical Corp., West Monroe, La., $40,000,000.

• Andrew W. McAlpine has been named manager of the Vredenburgh, Ala., plant of E. L. Bruce Company. Prior to acquisition by Bruce he served as logging superintendent.

• Peter Vredenburgh III, prominent lumberman whose family holdings in Vredenburgh Lumber Co., in Alabama, were sold out not so long ago to paper mill interests, succumbed to a heart attack in Miami, Fla., during March.

• Edward V. French, The Atlantic Lumber Co., Boston, Mass., was elected president of the National Lumber Exporters' Ass'n at a meeting in New Orleans during March.

• C. S. Jones, of the Flack-Jones Lumber Co., Monkes Corner, S. C., has been named president of the Southern Pine Marketing Institute for the next two years. N. G. Wade, of the Wade Lumber Co. at Folkston, Ga., was elected veep.

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or How Rough the Terrain
the NEW
OTTAWA
TRACTO-LIFT
Handles the Load Faster, Easier
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BIG PNEUMATIC DRIVE TIRES . . . Flotation for heaviest loads
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GEORGE W. O'BRIEN

Powell River Veep Retires

• George W. O'Brien, for many years active in the logging industry in the Pacific Northwest, has retired as senior vice president of Powell River Co., Vancouver, B. C., but will continue to be associated with the timber business. In 1941 he joined Powell River Co. as general manager of logging operations and later became vice president in charge of all logging and forest activities. He was formerly president and manager of O'Brien Logging Co.

In addition to his interest in Powell River Co., of which he continues as a director, Mr. O'Brien is president and director of Northwest Cedar Products. He was for many years a director of Pacific Logging Congress, Canadian Forestry Association and Red Cedar Shingle Bureau. He is a past president of the B. C. Loggers Association and Forest Industrial Relations Ltd.

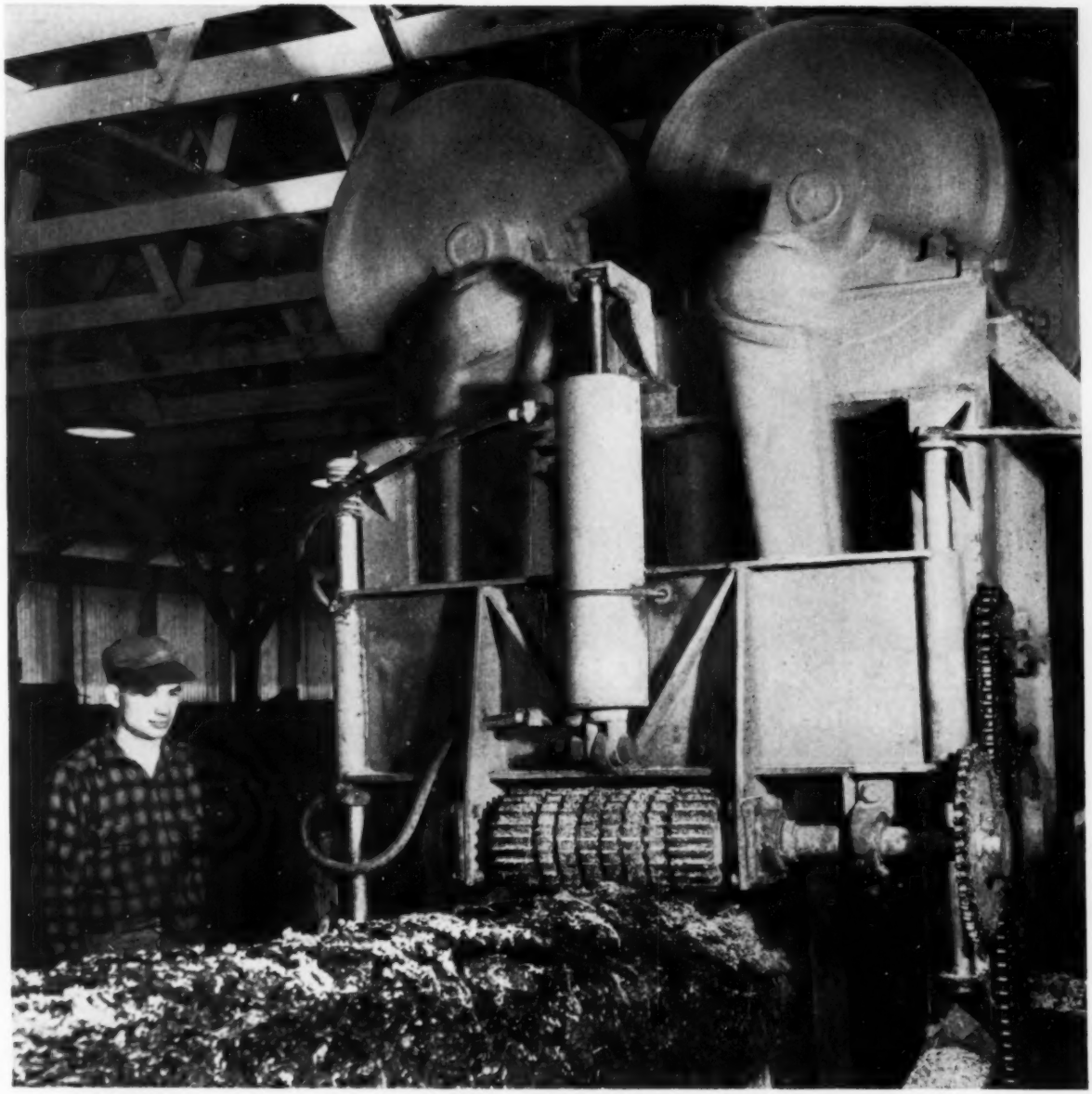
Distribution Data Guide Ready for Business Firms

• The Distribution Data Guide, a publication of the U. S. Department of Commerce, now is available on a subscription basis to all business firms engaged in or interested in the marketing and distribution of the nation's goods and services.

This monthly publication contains a selective review of current, basic information, statistics, surveys and reports—both government and non-government—of significance to retailers, wholesalers, sales organizations, purchasing agents, transportation and warehousing firms, advertising and market research organizations and many other business operations.

The Guide describes each item of material listed, gives the price and states where copies may be obtained. All items are indexed and cross-referenced in the semi-annual index supplements published with the July and January issues.

An annual subscription to the Distribution Data Guide is $2.00 and may be entered with the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. or at any Department of Commerce Field Office.



"UNOBA...a grease that won't pound out"

Fred Albertus, superintendent, Mill No. 3, Paul B. Hult Lumber Co., Dillard, Oregon

"You can see at a glance what a beating the top bearings on our 24" gang take on the outer stroke of the crank arm.

"To combat this terrific shock load we protect these bearings with UNOBA because we know it's a grease that won't pound out. Despite the fact that we are cutting consistently more with this saw than its rated 35 M capacity we have yet to lose a bearing due to lubrication failure. Naturally, we're sold on Union lubricants for sawmill use."

Gang saw operators tell us that UNOBA resists the shock loads inherent in these machines better than any grease they've ever used. If you're not yet using UNOBA we suggest you try it and see how it can lower *your* cost per thousand. Barium-lithium base UNOBA Grease is immediately available from your nearby Union Oil representative.

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Berger Air Tongs handle the big ones fast, sure and easy for Pilot Rock—in 1-man operation.

Pilot Rock Lumber Company considers safety and better log control important features of Berger Air Tongs.

BERGER AIR TONGS help PR's program for perpetual timber, cheaper logging and maximum wood usage

Not much over 15 years old—yet already renowned for its leadership in wood utilization—the Pilot Rock Lumber Company, Pilot Rock, Oregon, has a highly mobile shovel loader, equipped with Berger Automatic Air Tongs, as a major unit of its production equipment on the main side. It was selected both to speed up PR's immediate objective of more economical logging and to expedite its long-range forest management program—aimed at perpetual timber. Besides providing safer loading through positive control of each log from the time it's picked up until it's finally released—no hookers needed at the loading area—Berger Air Tongs rapidly and efficiently handle logs decked parallel to or at right angles from the road . . . They can help YOU load faster, more safely, at less cost. They're versatile, Berger-rugged, easy to install. Write for free folder.

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Tough American 300 Series Crane . . .

LIFTS THE 'HEAVIEST LOGS FOUND ANYWHERE'

Out in the rain forest area of the Olympic peninsula, old time loggers claim that the hemlock growing there is the heaviest found anywhere—up to 14 pounds per board foot!

Loading these rock heavy giants takes a machine with guts—often one that needs firm level roads and is so heavy that it has to be dismantled for highway travel. This may be O K for big operators who doze trails and spend months off the highways, but not for the smaller operator who must use the "hit and run" technique—move in, cut, load and move on. No time to make roads, less time to strip machines to meet highway limits!

An American 300 Series Crawler Crane has proved ideal for the logging operations of John Kirner who works the Hoko River area on the peninsula. Kirner's American moves over rough, roadless terrain and, with wide crawler pads and rugged construction, operates unfalteringly. At the jobsite, his 300 Series often lifts logs that Kirner would have expected only a larger machine to handle. His biggest lift to date is an 18-foot log, 74 inches across that officially scaled 4710 board feet—a man-sized lift for any machine! And because his American falls within road weight limits, Kirner rolls right onto the highway without expensive "stripping" delays!

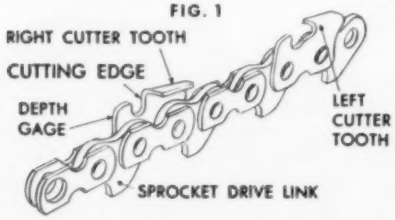
Successful American Crane on-the-job stories like this are found around the world. Ask an American crane owner or operator what it can do—then see your American Distributor!

AMERICAN HOIST
and Derrick Company
St. Paul 1, Minnesota

THE RIGHT WAY TO SHARPEN ROUND-HOODED CHAINS

Nicholson's new Round Double Cut Chain Saw file was especially developed for the new high-speed chains—and is ideal, too, for all round-hooded chains. It was developed in close co-operation with leading chain saw makers, and is endorsed by them. Check your manufacturer's handbook for diameter recommended on your chain. The Nicholson Round Double Cut Chain Saw file is available in 8" length and the following diameters: 183—3/16", 184—1/4", 189—9/32", 185—5/16", 186—3/8".

FIG. 1



For best results, hold the chain in a vise or clamp. Some manufacturers supply file holders with guide lines which indicate the correct angle at which the file should be held to the teeth. This facilitates your filing of equal angles on all teeth, both left and right. File all teeth on one side, then turn chain around and file all teeth on other side.

However, the new Nicholson Round Double Cut Chain Saw file cuts so smoothly, and with so little "chatter," that you can give your chain on-the-job touch-ups without removing it from the blade. After sharpening in this manner, run the chain free and oil heavily to wash out any filings.

SHARPENING SIDE CUTTING EDGES

Place the Nicholson Round Double Cut Chain Saw file at a 25° angle (for hard woods) to a 45° angle (for soft woods) to the side cutting edge (fig. 1). Hold the file level and press back and slightly up during the filing stroke.

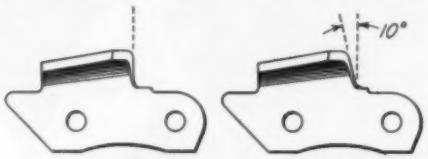


FIG. 2 RIGHT FIG. 3 RIGHT

For most purposes, the side cutting edge should be vertical (fig. 2). A small amount of backward slope is recommended for cutting frozen or extremely hard wood (fig. 3). This results in smoother action but faster wear, and requires greater pressure on the saw.

Do not allow a "hook" to develop in the vertical cutting edge (fig. 4). This is caused by holding the file too low, by using excessive pressure, or by using a file of too small diameter. Filing too close to right angles to the saw bar will also hook the teeth. You will find that the right diameter of Nicholson Round Double Cut Chain Saw file cuts crisply and cleanly, with very little pressure, and creates a keen cutting edge without excessive metal removal.

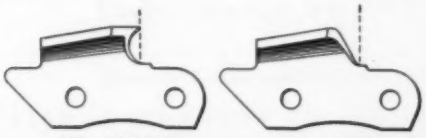


FIG. 4 WRONG FIG. 5 WRONG

Do not hold the file too high on the teeth, which will result in too much slope and too blunt a tooth top (figs. 5 and 8). This will cause the engine to overspeed, so you will have to exert excessive pressure to do any work.

SHARPENING TOP CUTTING EDGES

You will obtain fast-cutting, long-lasting results by using the right diameter file and at the same time avoiding filing the bed of the tooth link by the barest amount of clearance. This will give the top cutting edge of the tooth a desirable hollow-ground effect (fig. 6). For very soft wood, the file may be held somewhat lower to give a thinner cutting edge (fig. 7). However, an edge filed in this way will dull quickly during ordinary use and weaken the chain somewhat by filing into the tooth link beds.

Do not hold the file too high on the edge (fig. 8). The edge will be blunt and slow cutting.

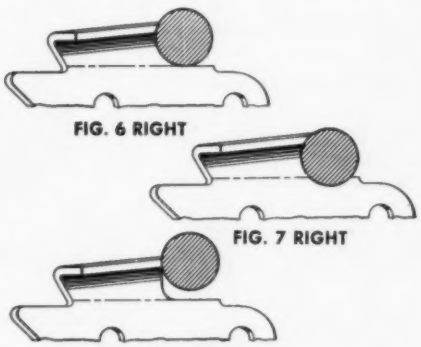


FIG. 6 RIGHT

FIG. 7 RIGHT

FIG. 8 WRONG

SETTING DEPTH GAGES

As cutting teeth become lower from sharpening, depth gages (fig. 9) must be lowered correspondingly. It is essential that all depth gages be the same height. Otherwise, high teeth are forced into the wood causing rough and inefficient cutting.

Some manufacturers supply a special tool for gaging purposes. However, clearance can be determined by laying a straightedge or, if such is not handy, a flat mill file across cutting teeth. In filing clearances form a rounded contour on the leading edge (fig. 9). This will help gages run smoothly through the cut.

The Nicholson Mill Bastard file is suggested for lowering depth gages. 8" is usually the most popular file size. Clearances may be as little as .025" (approximately half the thickness of a penny) below the cutting edges (fig. 9) for hard wood, or as much as .050" (the thickness of a penny) below the cutting edges for soft wood. Depth gage clearance as set by the manufacturer is best for all-around use. Your chain saw handbook will tell you what this clearance is. Consult your chain saw dealer for more or less clearance for special usage.

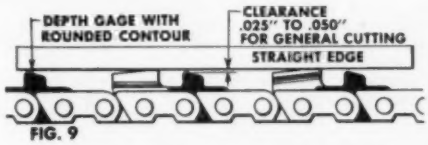


FIG. 9

Write for ***"File Filosophy"*** *—free 49-page book on selection, care and use of files, including large selection on all types of chain and other saws.*

NICHOLSON FILE COMPANY
Providence, Rhode Island
(In Canada: Nicholson File Company of Canada Ltd., Port Hope, Ontario)

Nicholson Round Double Cut — Nicholson Mill Bastard

Available at hardware stores and chain saw dealers

NICHOLSON FILES *A FILE FOR EVERY PURPOSE*

Pay Yourself a BONUS of $2,302.56 a year!

What does a man cost you?

Based on the $1.00 per hour minimum wage, the 40-hour work-week and average unemployment taxes and workmen's insurance rates, the least you pay just *one man* in one year is $2,302.56. Thus any change you can make in your sawmill operation to permit elimination of one laborer means a payroll savings of at least $2,302.56.

WANNA BET?

Odds are that Corley can help you reduce your payroll by at least one man without loss of one foot in production. If you cut as much as 10,000 board feet a day and haven't made some recent drastic changes in your operation, it's a good bet you have too many men on your payroll — and a better bet that Corley can help you do something about it.

THE ANSWER

Maybe the answer to your problem lies in a Corley Hydraulic Log Turner and Loader. With this efficient machine your sawyer does all the loading and turning, eliminating the need of at least one man. Cost? Very little more than that man would cost you in a year.

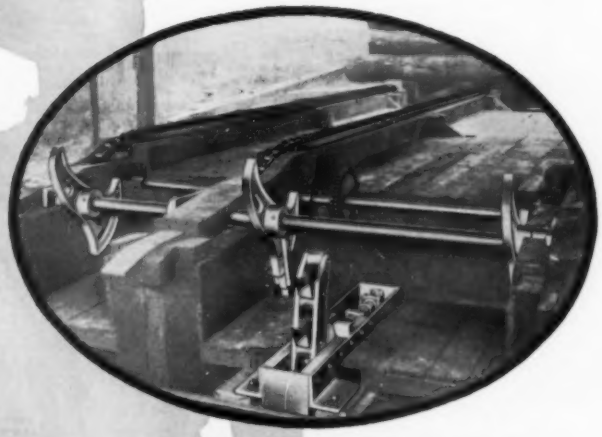
Maybe the answer is a Corley Linck Gangsaw. This is the machine now revolutionizing lumber production. You gain in far greater over-run, with unmatched accuracy. Power requirements are less than for either band or circular saw. The big PLUS, though, is in labor savings. With a Corley Linck installation . . . costing as little as $15,000 . . . the production of every man on the payroll can be doubled, tripled — or even better.

These are but two of the many Corley ways to replace manpower with machine-power. There are other Corley machines that insure your getting the maximum out of each labor dollar.

And remember, Corley machines work overtime without costing you time and a half.

The Time is NOW!

Because of increased labor rates, lumber production costs have reached a critical point. You owe it to yourself to examine every possibility for getting more out of the man-hours you pay for.



HYDRAULIC LOG TURNER

LINCK GANG SAW

Why not discuss your problem with a Corley representative?

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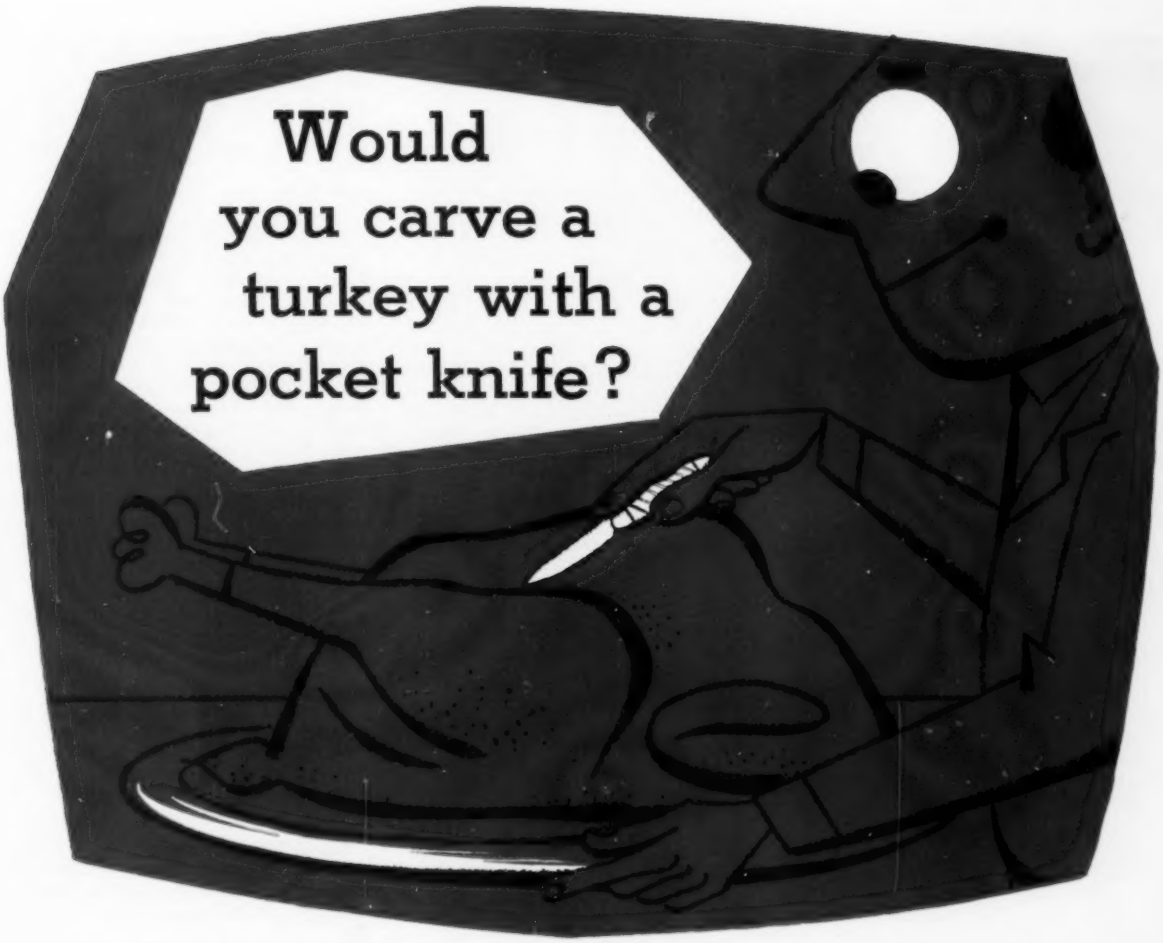


You could, but it's more efficient to use a carving knife. You always get better results with the knife specifically designed for the job. That's why "OK BATTLE AXE" Chipper Knives improve your chipping operation.

They're especially designed to do the job best, to give you maximum production of uniform chips with a minimum of sawdust and splinters.

"OK BATTLE AXE" superiority begins with the selection of special high alloy steel which is thoroughly and evenly hardened in salt bath furnaces, then carefully tempered to produce dependable, durable blades. Extra-keen OK cutting edges hold up longer under high impact loads without chipping or shelling and deliver longer runs between regrindings than ordinary knives.

Stop robbing profit to pay for downtime. Improve your overall chipping operation. Specify ... install ... "OK BATTLE AXE" Chipper Knives. Made to fit all makes of paper mill and saw mill chippers. Many sizes are stocked at Cincinnati, Ohio, and Portland, Oregon.

For complete information on "OK BATTLE AXE" Chipper Knives, write Dept. 46-R

THE OHIO KNIFE CO.

CINCINNATI 23, OHIO

Manufacturers of OK HOG KNIVES, VENEER KNIVES, CHIPPER KNIVES, PLANER KNIVES

From WOODS AND MILLS

Charles Ohs is the newly appointed farm forester at Sandpoint, Idaho, for Bonner and Boundary counties. A forestry graduate of University of Idaho, he formerly was employed by the Washington division of forestry.

William T. Hollen has been named to an executive position in the **Willimina Lumber Co.**, Willamina, Ore. His executive activities will extend to Hampton Lumber Sales company, Spirit Mountain Timber company, Hampton Lumber Mills, Ltd., and affiliated lumber and veneer producing companies in California, Oregon and British Columbia.

Ed Nelson has retired as head millwright of the **Simpson Logging Co.**, Shelton, Wash. He worked for the Simpson Logging Co. for more than thirty years. He has been succeeded by **Harvey Grissinger.**

Forest tree seedlings have been in higher demand in Missouri this year than at any previous time, according to State Forester **George O. White.** Two million little pine trees were sold by March 1.

The Montana-Idaho Lumber Co., Rexburg, Idaho, expects to increase its cut this year by from 25 to 50 percent as a result of new equipment installed during the winter shutdown.

Ray A. Jasper has been named plant superintendent of **Diamond Match Co.'s** Superior, Mont., sawmill. He has been sawmill foreman. He has been with Diamond Match Co. since 1935. **John A. Anderson** another veteran Diamond employee, has been made dry kiln and yard foreman at the Superior operations.

Walter A. Swanson Lumber Co., Springfield, Ore., now operating a Skragg type small log stud mill, plans to install a carriage for breaking down larger logs. After that it has in mind installing a small log barker and chipper and then a veneer lathe.

The Weiser Lumber Co.'s new sawmill at Marysville, Wash., is now in operation. This mill replaces one that burned a year ago. The mill will specialize in the production of cedar products.

Western Stud Mill, Inc., Elgin, Ore., has built a new plant which Manager **Howard Crippen** believes will be one of the most efficient plants of its kind in the industry. One of the features of the new mill is the remote control carriage.

Valsetz Lumber Co., Valsetz, Ore., recently cut a sixteen foot log that was 122 inches in diameter at the large end and 99 inches at the small end. A total of 7,100 feet of lumber was produced from this log. The tree from which the log was cut produced 44,000 feet of lumber.

An eighteen foot log, ten feet in diameter, was recently logged by the **Brundage Logging Co.**, Forest Grove, Ore., and hauled to the Linnton plywood mill. The log came from the Fox Creek area in the Wilson River area which was swept by the great Tillamook fire years ago.

North Pacific Plywood, Inc., Tacoma, was high bidder for 1,000,000 feet of timber in the Woods Creek area of the Gifford Pinchot National Forest. The company paid the equivalent of $81.50 for the Douglas fir.

Centralians Inc. is the name of a new corporation which plans to establish a hardwood drying and finishing plant on the site of the Linscott site near Centralia, Wash. **R. F. Steinmetz** is president.

Packwood Lumber Co., Packwood, Wash., expects to install a log barker and shipper in the near future. The equipment will produce from 100 to 120 units of chips per day.

John Chopot, who operates a sawmill near Colville, Wash., recently installed a Stetson-Ross planer which will have a capacity of about 75,000 feet per day.

McNamara & Peepe Lumber Co., Crescent City, Calif., will shortly install a Prescott 8-foot band mill. During the summer the company will set up a small moulding operation and a new mill to cut 42-foot lumber.

Shepard-Morse Lumber Co. has purchased the **Adams Bros.** sawmill near Cathlamet, Wash. Adams Bros. are building a new mill east of Deep River which will specialize in long dimension.

A new company known as the **Anchorage Independent Lumber Co.**, has been organized and purchased the Anchorage, Alaska, branch of the Independent Lumber Co. **The Independent Lumber Co.**, with headquarters at Fairbanks, also operated a branch at Anchorage which has now been sold. Officers of the new company are **F. E. McDermott,** president; **R. W. Ferguson,** vice-president; **C. W. Ellis,** secretary; **Leslie Nerland,** treasurer.

Fairhurst Plywood Sales Co. has acquired the **Industrial Plywood Corp.**, and **Industrial Plywood Sales Co.**, Willits, Calif. **Bob Ferguson** will be plant superintendent. **E. H. Bacon** will have charge of sales. **H. J. Nunneley** retires as president and manager.

Scott Paper Co. has just opened a log dump and boom on the east side of Lake Washington near Kennydale. Facilities have been provided for booming a large number of assortments. The pulp logs will be sent to the company's mill at Everett while saw logs will go to sawmills in the Seattle area. The dump is being operated by a subsidiary known as the Scott Pacific Terminal.

Seaside Shingle Company's new mill south of Seaside, Oregon, is now in operation. The mill has a daily capacity of about 65 squares.

The **Lofgren & Sons** new shake mill at Oakville, Wash., is now in operation.

Donald G. James has been made manager of the **Hampton Lumber Co's** recently formed plywood and veneer division, with headquarters in the Company's Portland, Ore., offices.

Loren Meyer, who operates a shake mill near Morton, Wash., is building a new cedar specialty plant and shake mill west of Onalaska, Wash.

George Lonngren has been named assistant logging superintendent for **Rayonier Incorporated's** Grays Harbor working circle.

Floyd Irish has started a small sawmill having a capacity of about 15,000 feet per day near Morton, Idaho.

Fire swept the **McGraw-Curran Lumber Company's** sawmill at Yazoo City, Miss. The owners plan to rebuild the mill.

The T & T Shake and Shingle mill on Mitchell Island, near the mouth of the Fraser River, was destroyed by fire May 15 only a few days after it had been built. Loss was estimated at $25,000.

• **Raymond G. Junqua,** 54, widely known and respected in loss adjustment work throughout the lumber industry, died recently in Miami, Florida. He was manager of R. G. Junqua & Associates, an adjustment firm specializing in the settlement of losses in the lumber field and was closely affiliated with U. S. Epperson Underwriting Company, of Kansas City. He is survived by his wife, a daughter, and two grandchildren.

Gray Evans

BIG-TIME REDWOOD LOGGER

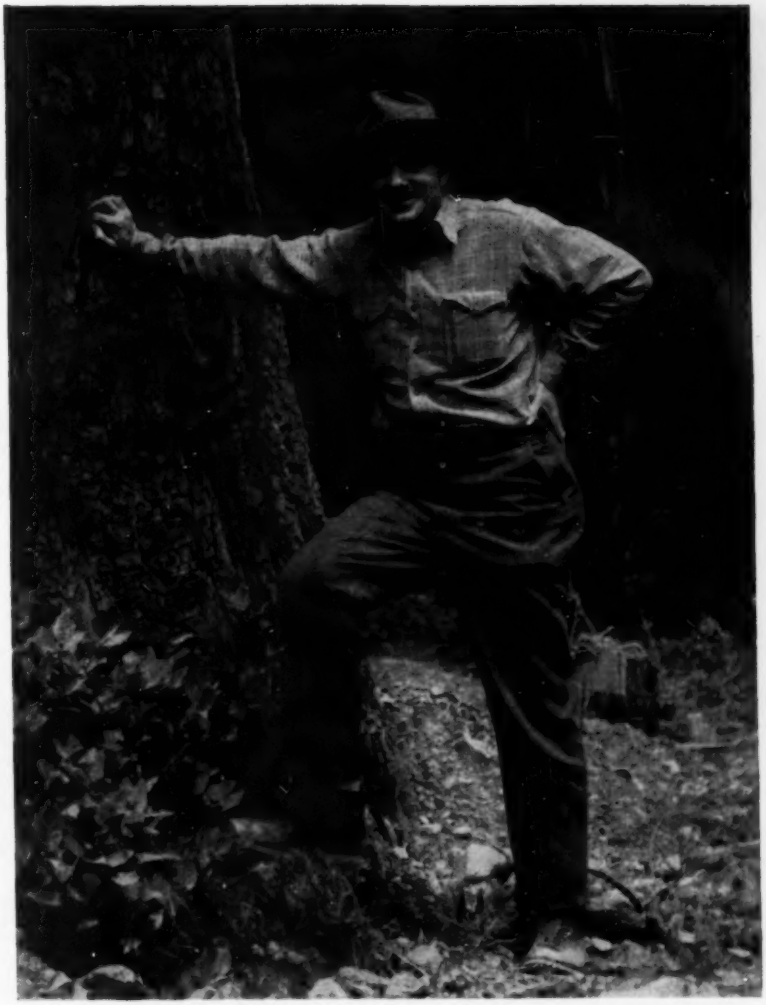
By Stewart Holbrook

A FORMIDABLE job in the redwood country is that of logging manager for the Hammond Lumber Company whose big mill is at Samoa on the sandspit that helps to form Humboldt Bay on the north California coast.

Gray Evans is the man. Born in New Jersey, he came as a child with his parents to California. By the time he finished high-school he knew what he wanted to do. It was to work in the woods, an ambition that was enhanced and given direction at the forestry school of the University of California where among Evans' teachers was Emanuel Fritz, known with some reason, as Mr. Redwood.

After a summer with a cruising party of the U. S. Forest Service, young Evans took a job with the Northern Redwood Company, at Korbell, putting chokers around large logs. In 1934 he went to Camp 1 near Eureka for Hammond. He began with time-studies of what in the redwood region was then called chopping but is now falling and bucking. Then came scaling and bull-bucking. Finally he took over as head bull-bucker for the Hammond operation.

Meanwhile dragsaws were being tried, then electric saws, then gas-driven chainsaws. Evans experimented with all types, doing a lot of falling and bucking himself. He also gave considerable thought to the art of making a layout, which is the costly but necessary job of preparing the ground where a redwood tree is to be felled; and though he refuses to take any personal credit, he believes that Hammond pioneered the use of a bulldozer for making layouts. That was in 1938. The practice has since become standard in all redwood operations.



Logging manager for Hammond Lumber Co. at Samoa, on the north California coast, Gray Evans represents the younger generation of woods managers.

During 1943-1946 Evans was in the United States Navy, seeing the world between Saipan and France. In 1947 he returned to Hammond as assistant to Waldron Hyatt, logging boss; and when Hyatt went to Samoa as division manager, Evans was put in charge of the woods. His woods comprise five sides, 16 miles of railroad, and 160 miles of truck roads, all Hammond, not public highway.

Gray Evans makes his home at Big Lagoon Camp, just off the Redwood Highway where it follows a mile-long bridge and causeway. It seemed to me a perfect site for a logging camp. It also struck me that this clear-eyed, soft-spoken young man will do as a perfect symbol of the new generation of woods managers who feel that logging techniques must also meet the needs of practical forestry.

Bethlehem Pacific makes and sells a wide variety of steel to the western logging industry: bolts and nuts, wire rope, bars, wire, structural shapes, plates, forgings, sheets, tool steel. These and other steel products are known everywhere as top-quality.

Bethlehem Pacific is an integrated company with steelmaking plants in Seattle, South San Francisco, and Los Angeles. Sales offices: Los Angeles, Phoenix, San Francisco, Portland, Seattle, Spokane.

BETHLEHEM PACIFIC
COAST STEEL CORPORATION

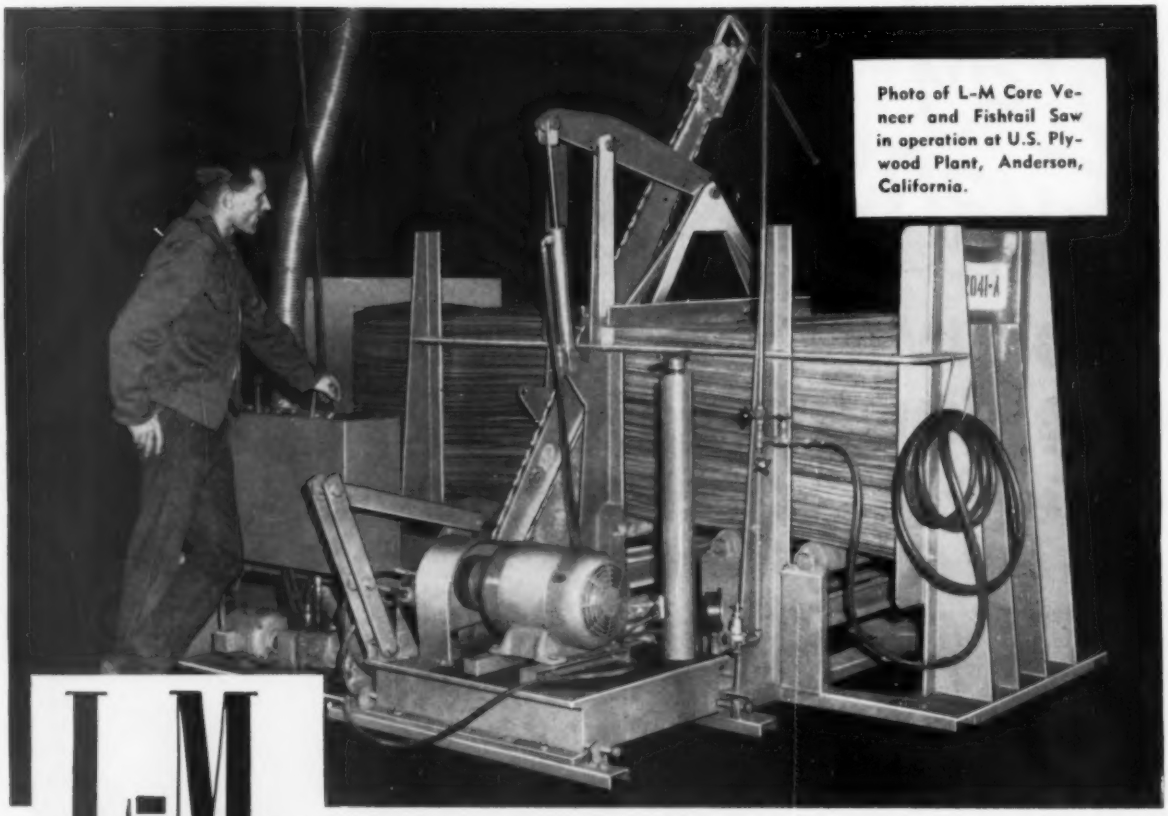


Photo of L-M Core Veneer and Fishtail Saw in operation at U.S. Plywood Plant, Anderson, California.

L-M's NEW *COMPLETE PACKAGE* UNIT FOR CORE VENEER & FISHTAILS

THE L-M PD4 CORE VENEER SAW CHAIN . . . Exclusively designed for one purpose only—to cut core veneer and fishtail stock smoothly, accurately, and at top speed *without tearing*. Only refuse is *sawdust — no chips — no splinters!* It's the only specifically designed core veneer saw chain on the market, and it's job-engineered to save you time and money!

CUTS DRY OR GREEN VENEER. Clean-cutting with either dry or green veneer. No change-over, no troubles to stop the work.

Send for Folders on L-M Specifically Designed Saw Chains: L-M PD4 Saw Chain for cutting core veneer and fishtails; L-M PD1 Saw Chain exclusively for ripping; L-M PD2 Saw Chain exclusively for cross-cutting.

Now —a specialized unit for a specialized purpose! A tremendous time and labor saver for every plywood plant! Handles a complete lift-truck package of stock at once. Jogs, clamps and saws it through in practically one operation — all movement, including cutting, controlled by power! The L-M Saw whips through green or dry core veneer and fishtail stock *because* it's equipped with the *only* saw chain specifically designed for the purpose. Assures volume production in your plant with high speed, smooth, accurate cutting.

This new machine consists of the L-M No. 7500 Core Veneer Saw built into an integral unit with the Model 48 Core Veneer Bed. Beds are available for different sizes of core veneer sheets, **also mechanism to permit cutting bundles in multiple lengths.**

POWER CONTROLS. Your choice of manual, semi-automatic, or fully automatic power controls.

L-M EQUIPMENT COMPANY — THE HOUSE OF CHAIN SAWS

Electric Air, Hydraulic Controlled

Standard and Custom-built Models

Pond, Deck and Log Splitting Saws

Portable Electric and Gasoline Powered Chain Saws

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INTERNATIONAL SALES AND SERVICE

With 12 ft. bunks and 40" stakes, this R-15 "Euc" hauls loads of 16,000 board feet of Douglas Fir from a high load landing in Oregon.

Lower hauling costs with "Euc" Loggers

This Model TD Log Hauler carries loads up to 24,000 board feet, British Columbia scale, on a show northwest of Vancouver . . . has cut cycle time by 25% on a 7-mile haul.

All Euclid equipment is engineered and built expressly for heavy off-the-highway service on the toughest jobs. These two log haulers are no exception . . . they assure longer life with lower maintenance cost than modified highway trucks because of their heavy duty chassis, single drive axle, larger tires and easier servicing.

Powered by a 230 h.p. diesel, the Euclid R-15 Log Hauler is equipped with NoSpin differential, hydraulic speed retarder, power steering and 16.00 x 25 dual drive tires. With a 5-speed transmission and 3-speed auxiliary, 15 speeds are provided to meet the toughest hauling requirements. It's designed for use with trailers having 10 to 12 foot bunks.

For larger loads requiring 12 to 14 foot bunks, the Model TD Log Hauler is your best bet. It has a 300 h.p. engine, Torqmatic Drive (torque converter and semi-automatic transmission), NoSpin differential, hydraulic speed retarder and power steering. Drive tires are 18.00 x 25 duals.

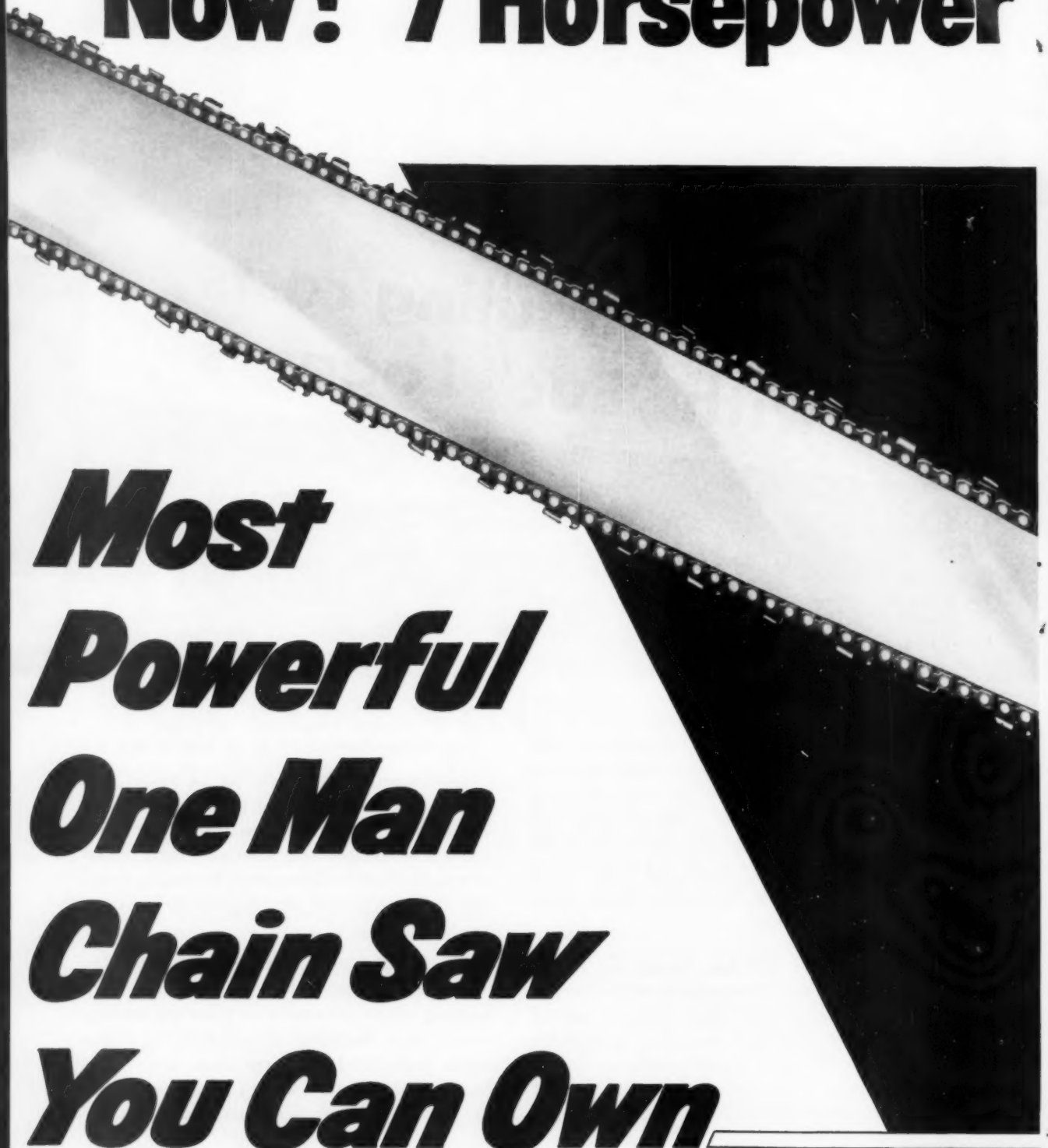
Other Euclid equipment — crawler tractors, motor scrapers, rear-dump and bottom-dump hauling units — can help cut your log hauling costs, too, by building and maintaining access roads faster and at lower cost. Have your Euclid dealer show you why so many owners say *Euclids are your best investment.*

EUCLID DIVISION GENERAL MOTORS CORPORATION, Cleveland 17, Ohio

Euclid Equipment

FOR LOGGING, CONSTRUCTION AND MINING

Now! 7 Horsepower



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A COMPLETE LINE OF CHAIN SAWS FOR EVERY CUTTING JOB

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A DIVISION OF TEXTRON AMERICAN, INC.

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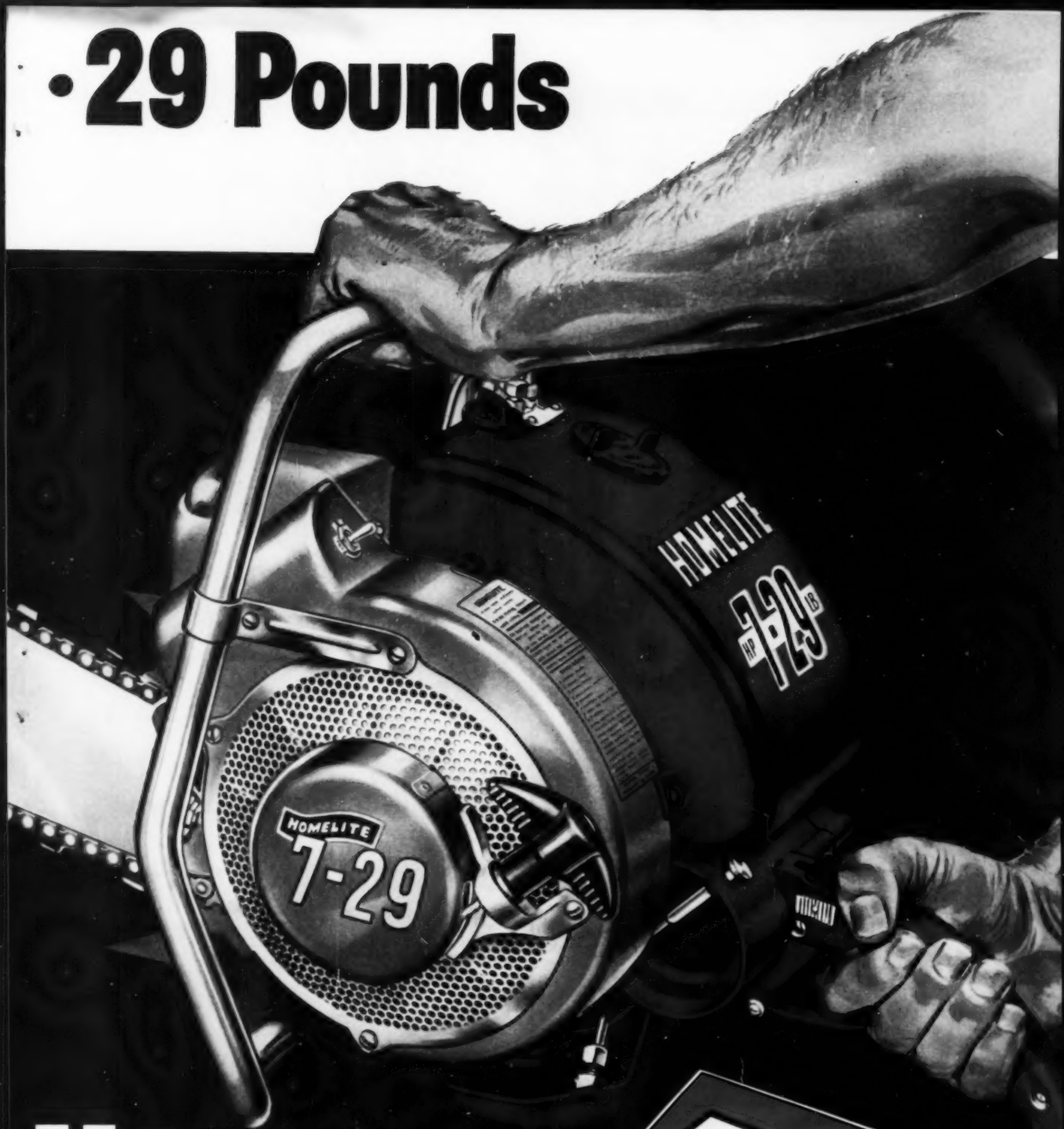
•29 Pounds



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JACKSON

First in major veneer lathe improvements and features

✓ All-Steel Construction

✓ Simplified Hydraulic Controls

Jackson all-steel lathes are ruggedly built to LAST. Years of service throughout the industry have proved Jackson lathes have no equal in speed of feed, convenience of operation, performance. The Jackson Series #660-A is furnished most commonly for handling sizes from 54" to 96" swing, knife length from 66½" to 135", sizes which fit most operations. However, Jackson will custom-build special equipment to fit *your* needs. For complete information and specifications write today to: Veneer Machines Division, Jackson Industries Incorporated, Drawer 591, Birmingham, Alabama.

VENEER MACHINES DIVISION

JACKSON INDUSTRIES INCORPORATED

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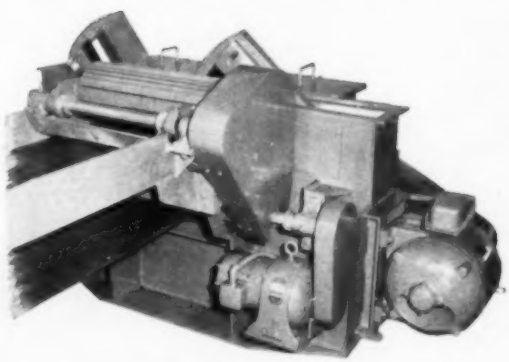
New FROM Jackson

ALL-STEEL

Veneer Chipper



Don't waste that waste! Turn it to profit. Paper mills, pulp mills, board manufacturers, some roofing paper manufacturers . . . all need veneer waste in proper chip form. The Jackson #60 Veneer Chipper turns your waste into chips varying from ⅝" to 1¼". Numerous installations have proved the Jackson #60 Veneer Chipper can *more than pay for itself in less than a year.* Don't burn up another dollar of potential profit. Write today for complete information.

B.F.Goodrich

All-Nylon Rock Logger tires cut costs per mile by 50%, logger reports

P. A. REINCKE trucks haul logs on private gravel and rock roads near Pacific Beach, Washington. Loads average 50 tons. Under such rugged conditions tire bruise breaks and blowouts were common. Then Reincke switched to B. F. Goodrich *all-nylon* Rock Logger tires.

The result: the company has yet to have a bruise break or blowout on a B. F. Goodrich *all-nylon* tire. Road delays have been reduced two-thirds, costs per mile cut by 50%.

Nylon withstands double the impact of regular cord bodies, resists heat blowouts and flex breaks. That's why tires built with the B. F. Goodrich *all-nylon* cord body outwear even the extra-thick tread, *can be recapped over and over!* The Rock Logger tread is specially compounded to defy rock cuts and bruises. And the husky cleats grip without slipping.

If you want lower tire costs per mile and longer, trouble-free tire service, see your B. F. Goodrich retailer. He has a tire specially built for every logging need. *B. F. Goodrich Company Tire & Equipment Division, Akron 18, Ohio.*

P. A. REINCKE specifies B. F. Goodrich *all-nylon* tires on new equipment, orders them for replacement on present units.

THIS RIG WORKS 11 hours a day under 50-ton loads of logs on private haul roads near Pacific Beach, Washington.

Specify B. F. Goodrich tires when ordering new equipment

B.F.Goodrich
FIRST IN RUBBER

Your B. F. Goodrich retailer is listed under Tires in the Yellow Pages of your phone book

To get evenly spaced knife cuts and extra smooth surfaces under fast feed conditions — perfect balance, perfect mating of the knives is a must. Simonds Thin Planer Knives *are* mates . . . uniform in width, thickness and bevel . . . come to you packed in perfectly balanced pairs!

They're uniform in temper too — never too hard, never too soft. No Simonds knife can be a slacker — each carries its *full* share of the cutting job.

Steel for Simonds Knives comes right out of our own steel mill. It is formulated to take the high heat of fast feeds, wear evenly, resist nicking and stay sharp longer.

It's a proven fact, you'll get longer high speed runs and smoother finished surfaces with Simonds Thin Planer Knives. Everybody does!

For Fast Service from Complete Stocks

Call your SIMONDS Industrial Supply DISTRIBUTOR

SIMONDS
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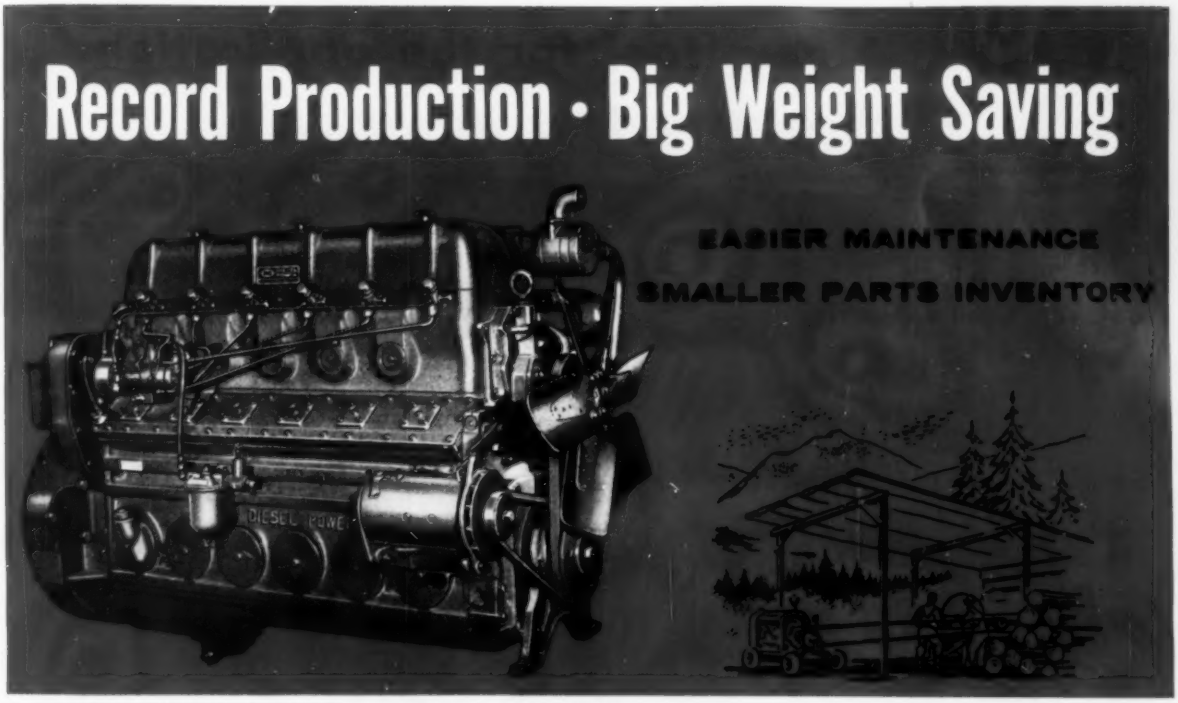
Record Production · Big Weight Saving



6 Cylinder P&H Industrial Diesel 205 H.P. at 1800 rpm—Weight: 1,900 lbs.

You can't beat P&H diesel power for sawmills

P&H Diesel delivers maximum service at minimum cost

WHY?

Here are the 4 BIG reasons

1. DEPENDABLE POWER FOR HIGHER PRODUCTION . . . The P&H Diesel supplies power to cut cleaner, faster and with fewer interruptions. It reduces costly down-time for restarts. When the blade hits knots, this rugged, highly responsive P&H Engine doesn't falter.

2. LIGHT IN WEIGHT—EASIER TO MOVE . . . Where the compact, lightweight P&H Diesel replaces heavier diesels of comparable power, weight savings up to 1,000 lbs. are commonplace. Just what you want for portable sawmills.

3. LESS DOWN-TIME . . . For easier, faster maintenance the P&H Diesel has 25% fewer parts. All wearing parts are interchangeable. After thousands of "running" hours, the "unitized" P&H power assembly can be removed and replaced with a new one in only 30 minutes.

4. LOWER OPERATING COSTS . . . The P&H Diesel operates best with No. 2 furnace oil. And because it is such a highly efficient engine, it burns less of this low cost fuel.

Industrial and Automotive P&H Diesels are available in 2, 3, 4 and 6 cylinder models rated from 40 to 280 H.P. For complete information on *money saving* P&H Diesel Power contact your nearest Pacific Coast P&H Dealer OR write: P&H Diesel Engine Division, Harnischfeger Corporation, Crystal Lake, Illinois.

For Modern Engineering, Look to

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NOW! *A new tool for the application of automotive power...*

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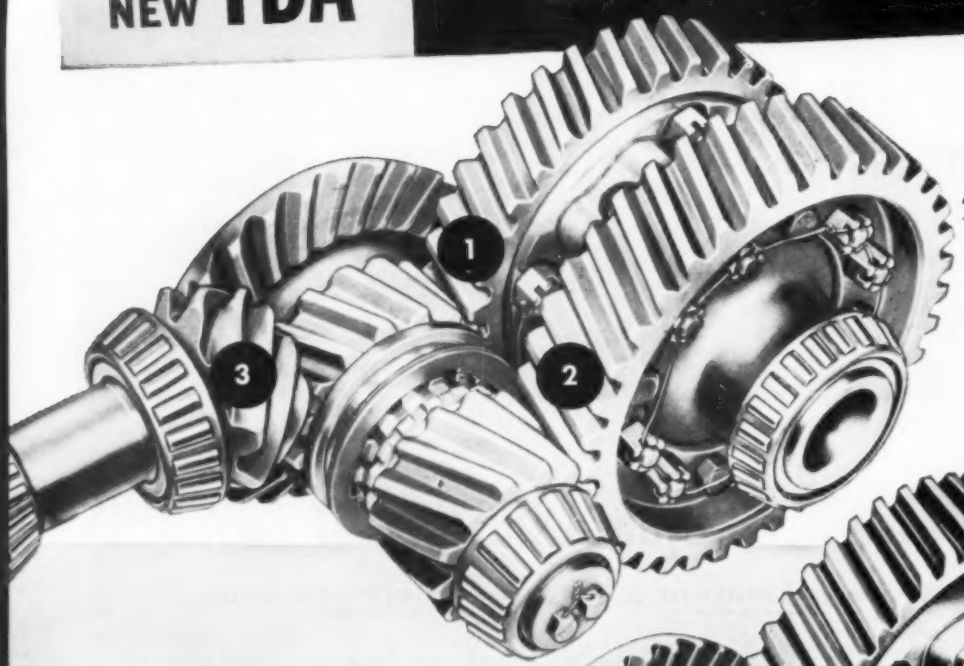

REGULAR TDA 2-SPEED AXLE

NEW TDA
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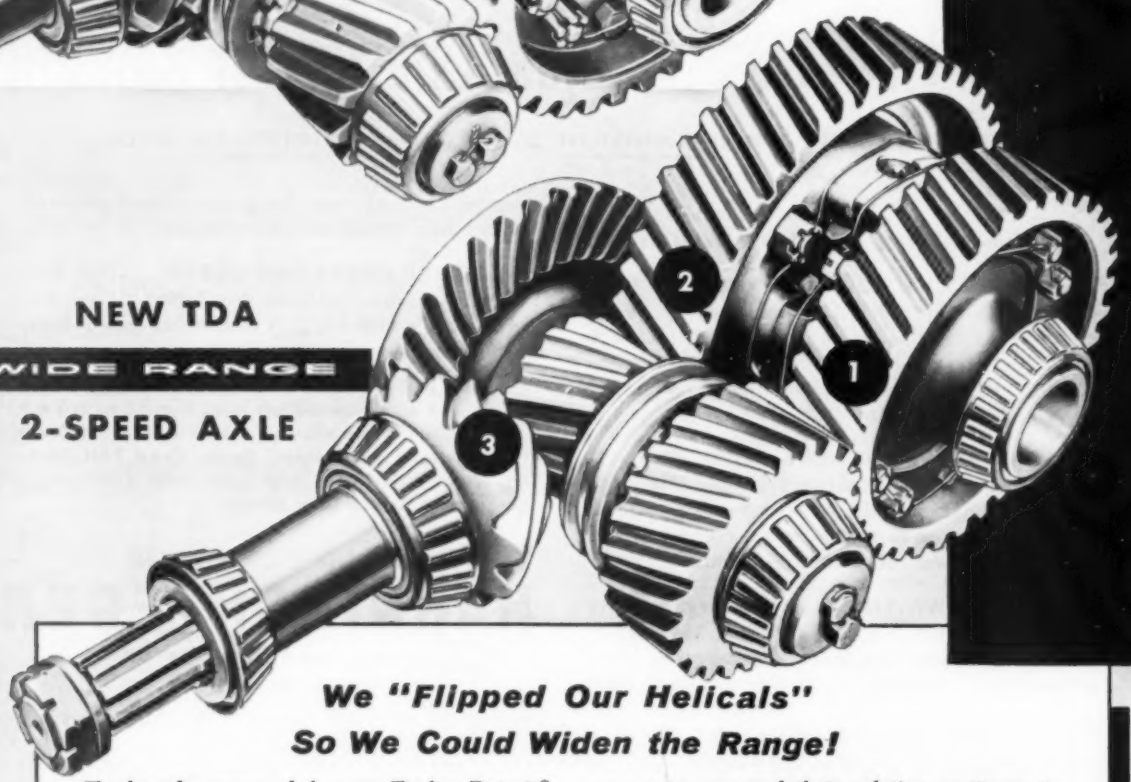
2-SPEED AXLE



We "Flipped Our Helicals" So We Could Widen the Range!

The broader range of the new Timken-Detroit® WIDE RANGE 2-Speed Axle was achieved by an ingenious mechanical rearrangement. We "flipped" our high-range (1) and low-range (2) helical gear sets—reversed their relative positions—to place the enlarged helical pinion of the high-range gear set where it would not interfere with the hypoid pinion (3) of the first-reduction gear set.

RANGE®

2-SPEED AXLE

for all operations requiring short transmission steps and high overall gear reduction

The new TDA WIDE RANGE 2-Speed Axle brings a new concept of flexibility and driving simplicity to the automotive industry. It offers all the highly desirable advantages heretofore available only through the use of complex multiple-speed transmissions or auxiliary gear boxes *without* many of the penalties of one or the other:

WITHOUT laborious two-stick shifting.

WITHOUT wasteful excessive weight.

WITHOUT increased driver fatigue.

WITHOUT unusual wheelbase limitations.

WITHOUT higher initial vehicle cost.

WITHOUT higher maintenance cost.

WITHOUT excessive wear on the lower speed gears of the transmission.

WITHOUT restricted over-all gear reduction.

WITHOUT complicated shift patterns.

This is but a brief summary of the many distinct, positive, provable advantages afforded by the development of this new WIDE RANGE concept in the famous TDA line of double reduction two-speed axles. For complete information on the new TDA WIDE RANGE Axles now available (in both 2 to 1 and 2½ to 1 ratio spreads) call, wire or write your nearest vehicle dealer or branch.

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DETROIT 32, MICHIGAN
The Accepted TDA Standard
TRADE MARK REGISTERED

World's Largest Manufacturer of Axles for Trucks, Busses and Trailers

Standard Engineer's Field Report

CASE HISTORY

LUBRICANT RPM Delo Oils

FIRM Nelson Logging Co., Twain Harte, Calif.

Trucks work 4 years with no lost bearings on tough, high-mountain logging job!

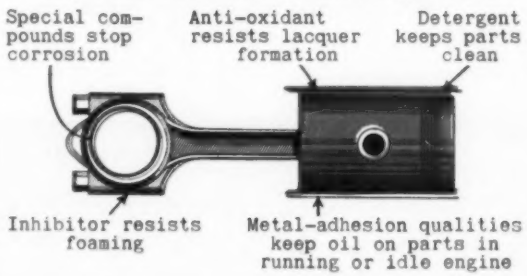
In hauling 25-ton payloads out of the Sierra Nevada Mountains, Nelson Logging Co.'s 10 International trucks like the one above operate in lower gears more than half the time—often in low and compound low. Using RPM DELO Special Lubricating Oil, they have not had a single bearing failure in four years of tough service where mountain roadbeds always are either deep dust or heavy mud and snow. Bearings above show typical good condition after three years of this rugged work. "We get an average of 3 years service from piston assemblies in our trucks," says Slim Meissen, Master Mechanic. "'RPM DELO' keeps all our engines clean, rings free and wear exceptionally low." Nelson Logging Co. uses RPM DELO Oils in all equipment—the 10 logging trucks, 11 other gasoline-powered units, 6 diesel tractors and a loading crane.

RPM DELO LUBRICATING OILS

TRADEMARK "RPM DELO" REG. U. S. PAT. OFF.

FOR EXPERT HELP on lubrication or fuel problems, call your Standard Fuel and Lubricant Engineer or Representative, or write to 225 Bush Street, San Francisco, California.

Why RPM DELO Oils prolong engine life


Special compounds stop corrosion
Anti-oxidant resists lacquer formation
Detergent keeps parts clean
Inhibitor resists foaming
Metal-adhesion qualities keep oil on parts in running or idle engine

STANDARD OIL COMPANY OF CALIFORNIA

Safety Engineering

A Message For Woods Bosses . . .

• Plan Your Work

When you have a job to do, first of all take the time to plan it. Figure out how to do it best, quickest, easiest—how many men you'll need, where and when to start, what tools and equipment to use.

You'll get a good start and best results if you lay out the job and organize it. Plan for a safe job, too. This means tools, rigging and equipment in good condition.

• Start Men Right

A worker's first day on the job is mighty important to him—and to you. That's when he needs your help most and is most willing to accept your advice.

The results you get on the job come through the people working for you. So start the men right, if you want top production. One of the best things you can do to a fellow is to give him a pat on the back if he deserves it. Try it sometime. Insist on safe, efficient work right from the start. Practice what you preach.

• Instruct Workers

First—interest him in the job. Tell his what it's all about and what he'll be doing. Find out what he knows about it.

Next—tell and show him how to do it. Some fellows learn more slowly than others. So teach the job one step at a time. Be sure he understands the safety points; for instance, that an axeman shouldn't chop toward his feet.

Then—test him. Ask him to do the job and tell you how it's done. Patiently correct his mistakes, watching for those safety points all the time. Have him repeat the job until you know that he knows.

Last—put him on his own. Check him often to be sure he's doing the job safely and well. Tell him where to go if he needs help.

If the worker hasn't learned, the boss hasn't taught!

• Supervise Carefully

Accidents are caused mainly by just two things—unsafe acts and unsafe work conditions. In the woods you can't prevent all dangerous conditions. But you can help the man who doesn't pay attention to safe work practices, and they cause most injuries anyway.

Blowing off steam with lots of cuss words doesn't get results. A good boss doesn't lose his temper, or bawl out a man with the gang around. Encourage your men to suggest ways of improving their work and the job in general. Make them feel that their opinions are wanted. Finally, get around to each man just as often as you can.

"He holds the woods record:—*Fifty* widow makers—and *still* going extra strong!"

Safety Man Retires

• Carl A. Benson, popularly known as "Art," retired as personnel manager and safety director of the Snoqualmie Falls, Wash. branch, Weyerhaeuser Timber Co., on January 31. Mr. Benson's retirement climaxed over 35 years of service with the Snoqualmie Falls operation alone.

Art was widely known by people throughout the lumber industry and particularly those engaged in safety work. During his 12 year tenure as safety director the Snoqualmie Falls Branch has been honored by numerous awards and recognition of outstanding safety achievements. Art was very popular as a speaker and on several occasions addressed the logging engineering class at the University of Washington on the values of the safety program.

One of Art's greatest tributes occurred last February at a community safety rally in North Bend. He was presented a plaque by Ed Sorger, Washington State supervisor of safety, for his efforts and contributions to safety in the lumber industry.

News Notes . . .

• 44th National Safety Congress and Exposition is to be held Oct. 22-26, Chicago, Ill. Sessions on industrial safety are scheduled for the Conrad Hilton, Congress, Morrison and La Salle hotels; traffic safety sessions at Congress hotel; commercial vehicle and transit safety sessions at La Salle hotel; farm and school sessions at Morrison hotel, and some safety sessions at Conrad Hilton hotel.

• Vacation safety is the theme of a new booklet and film produced by the National Safety Council.

The booklet, "Have a Good Time," is a valuable reminder to give employees on the eve of their vacations. It shows them how to enjoy their time away from the job and how to come back safe and sound. Colorful drawings illustrate safe rules of driving, swimming, camping and other vacation activities.

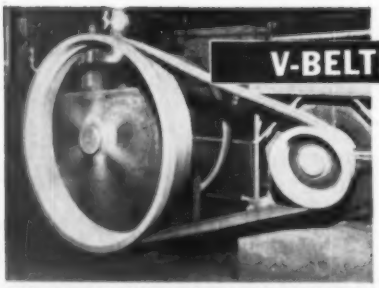
"Vacation Safety," a 10-minute sound motion picture, entertains while it teaches workers how to relax safely.

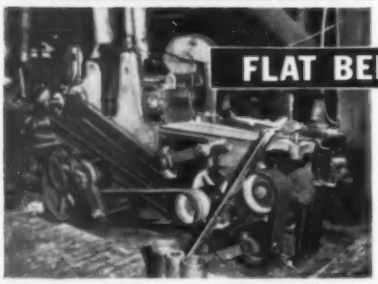
• An invention of Charles A. Wilson and Gordon Boyes of J. Neils Lumber Co., the ESCO W. B. Quick Release, passes all standard safety load tests and is praised as being the most positive safe Quick Release on the market. It has been approved by the State Safety Commissions of Oregon and Washington. The device enables an operator to release a load of logs at a safe distance by merely pulling the safety catch with attached line. It eliminates the hazard that exists wherever logs are being handled.

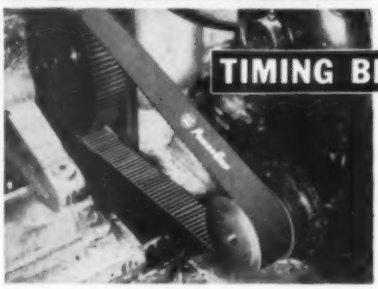
CREW FROM PLANT 3, Big Lagoon, Calif., Hammond Lumber Co., most of whom have worked for the entire first year of its operation, during which not one of the employees lost a day of work because of an injury. Back row, from left: Bill McMorrine, electrician; Jack Fockler, green chain puller; Gerald McManus, puller; Jesse Sanders, filer; Cecil Blake, puller; Merle Singleton, sawyer; Paul Cushman, grader; Layton Blake, off-bearer; Pete Williamson, edgerman; Wayne Patchett, pond-man. Bottom row is John Montez, puller; Billy Parker, lift-truck operator; Jimmie Tolley, trimmerman; Perry Murray, Jr., foreman; Jimmie Ralls, millwright; Ray Jerland, assistant master mechanic of all plants and Orvil Wilmot, pond-man. Joe Malherek, night clean-up man, not in picture. The crew under foreman Bruce Webster that does the logging for this plant, has also completed a year without any lost time from injury, which adds up to a complete logging and sawmill operation with over a year and still going strong.

A complete line of

Flat Belts, V-Belts and Sheaves and "TIMING"® Belts and Pulleys







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TYDOL HD *makes the difference in performance*

SMOOTH PERFORMANCE...on the hills and highways...with TYDOL HD Motor Oil. With fast-acting detergency—balanced for every service condition—TYDOL HD gets rid of sludge and grime...frees sticky valves and rings...cuts engine wear...keeps engines clean and powerful. TYDOL HD makes a big difference where it counts—in performance—because it cleans...as it protects...as it lubricates!

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TYDOL HD... *high detergency for any engine in normal heavy duty operation.*

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Now! New Heavy-Duty V-8's!

With the most GO under any truck hood!

Powered to pace today's traffic!

These new 206, 226, 257 hp. V-8's in the new INTERNATIONAL V-Line have a "built-in" swift response with maximum payload. You get more *go* at lights . . . more "keep going" on the hills with shifting greatly reduced . . . higher average road speeds within legal limits . . . top performance where it's needed most.

In short, the new INTERNATIONAL V-Line is built to set new highs in your profit column!

Tested and proved as no other trucks have ever been!

Developed and tested in the lab, then put through more than 1,000,000 test-track miles, and in 2,500,000 on-the-job miles in 39 different truck vocations.

These tests were made by profit-minded truckers with a gimlet-eye on mileage, hauling time and repair bills. Their conclusions—"GREAT, on every count!"

3 Great new INTERNATIONAL V-8 engines!

	V-401	V-461	V-549
Displacement	400.9 Cu. In.	461 Cu. In.	548.7 Cu. In.
Bore and Stroke	4⅛ x 3¾	4⅛ x 4-5/16	4½ x 4-5/16
Maximum hp.	206 @ 3600	226 @ 3600	257 @ 3400
Maximum Torque	355 @ 1800-2000	420 @ 1600	505 @ 2000

Pressure Controlled-Flo Cooling! Full circulation, fully controlled. Cold weather by-pass.

"Wet" Replaceable Exhaust Valve Guides.

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Get all the facts behind this great new truck story. Send for booklet "New Heavy-Duty V-8 Power Where You Need it Most." Write INTERNATIONAL HARVESTER COMPANY, P. O. Box 7333, Chicago 80, Illinois, or see your INTERNATIONAL Dealer or Branch.

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All-Truck Built to save you the BIG money!

Motor Truck • Crawler Tractors • Construction Equipment • McCormick® Farm Equipment and Farmall® Tractors

CHAIN BELT answers your wood handling problems . . .

NEW REX® DUROBAR WS* CONVEYOR CHAINS GIVE LONGER SERVICE, BETTER OPERATION

Right where the most sliding wear takes place, these new Rex Durobar Conveyor Chains have an extra heavy shoe on the block link. On woodyard conveyor service, or for any conveyor application where wear due to sliding is a problem, these chains are the economical answer.

This special wearing shoe not only adds extra life to the chain, but also improves its operation in the trough. There is less side play and wear to chain sides — a feature that boosts performance and cuts down repair and maintenance costs. Look over the features of this chain and you will see why lumber, chemical, pulp and paper mill companies prefer Rex Durobar WS Chains over all others for conveyor service.

- Extra heavy wearing shoes with reinforced rib materially lengthen chain life, improve performance and reduce costs.
- 3-diameter pin. A famous Rex feature that makes assembly and disassembly easy and quick.
- Close tolerances and quality construction. Close-fitting pins and links insure longest service. Heavy-duty, rugged construction — eccentric barrel puts more metal in contact with sprocket to lengthen service life of both chain and sprocket.
- Available in tough Rex Malleable Iron or wear-defying Rex Z-Metal. In Z-Metal, this chain has additional strength plus corrosion and abrasion resistance qualities.

Rex A-132-WS Durobar Conveyor Chain—Average Ultimate Strength—Malleable Iron—50,000 Lb. Width, Inches — 6-11/16.

*Special Wearing Shoes

and for your other chain or conveying needs —

CHAIN BELT COMPANY

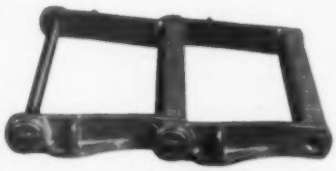
LEADERSHIP . . . through creative engineering

CHAIN BELT has the answer to lower costs for every WOOD HANDLING job!

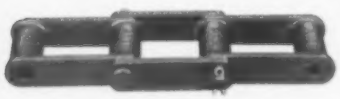
• Here, from the *complete* line of CHAIN Belt products you will find the answer to your power transmission, conveying or elevating problems. Not only will you find the exact chain, idler or bearing to fit your work — you will find the highest quality and dependability . . . quality built on over half a century's experience supplying the forest products industry.

Carefully selected metals . . . skillful hardening or heat-treatment . . . experienced workmanship and design . . . combine to produce the finest products — products that give you longer service, reduce down-time and cut maintenance costs. Whatever your wood handling problem, CHAIN Belt will give you the cost-cutting answers.

Rex H-Type Mill Chain — Most popular of all sawmill size chains for conveyor use. A tough, versatile chain with special wearing shoes for sliding.



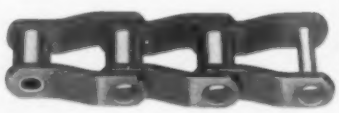
Rex H-Type Mill Conveyor Chains—Used for conveying slabs, chips, sawdust and refuse. Heavy, one-piece links with thick barrel provide long wear and good scraping action.



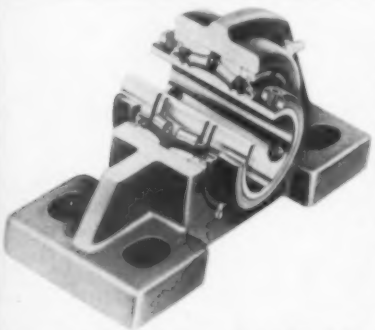
Rex Durobar and Combination Chains — A proven standard for wood handling service. Eccentric barrel of Durobar chain reduces wear on both chain and sprockets.

Rex Roller Drive Chain—The ultimate in high-speed drive chain. Highly flexible to withstand heavy shock loads. Precision-made for longest life. Available in single or multiple strands for a variety of drive uses.

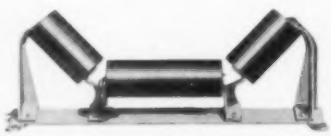
Rex Roof-Top Transfer Chains — Primarily a green chain, but frequently found in sawmill transfer service. Choice of peaked or flat roof-top design. Flat roof generally used for handling finished lumber as it will not score.



Rex Chabelco Chains — For severe conveyor service, Rex Chabelco Chains are first choice. Available in both straight and offset side bar construction. Also special Chabelco Chains designed for log deck, log haul-up, trimmer, etc. service.



Shafer Self-Aligning Roller Bearings — These bearings combine the best advantages of the roller and the ball by using concave rollers operating between convex races. Their stamina and dependability have been proved under extreme load conditions found in the lumber and pulp industries. Their reserve capacity is your assurance of longest life and continuous peak performance.



Rex Style No. 46 Troughing Idler — Specially designed for handling wood chips. Concentrating rolls of the idler are sloped at 45° to provide exceptional carrying capacity. This feature permits loading of chips close to the belt edge without spillage and gives the belt additional carrying capacity when compared to the conventional 20° sloped idlers.

CHAIN Belt Company
Dept. FP-3
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☐ Please send catalog on Rex products for the Forest Products Industry.

☐ I would like to discuss my wood handling problems with a CHAIN Belt District Sales Engineer.

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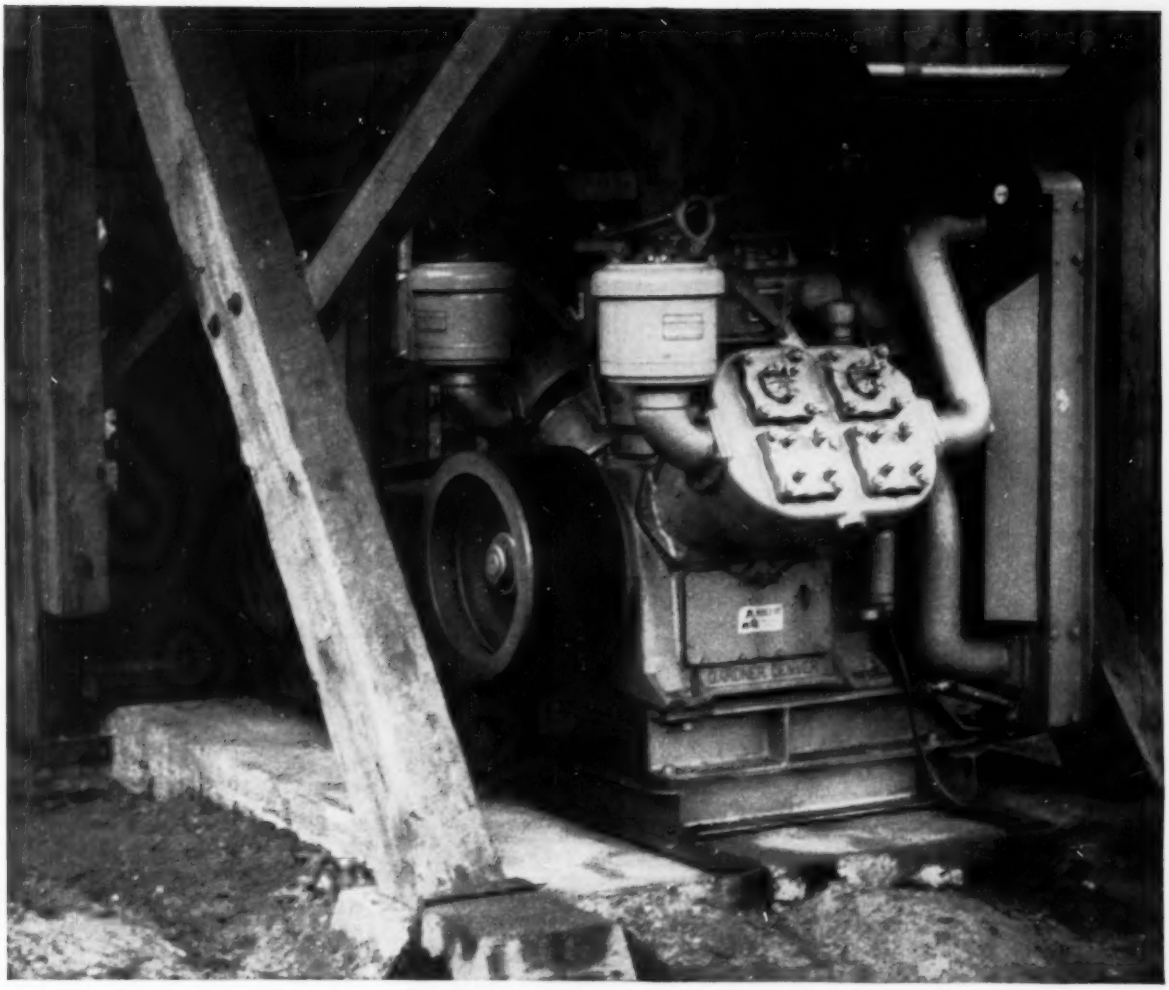

Air power goes in fast when you choose the Gardner-Denver WB

Air power is mighty useful around the mill. It's safe, convenient, economical, easily controlled. Non-sparking air motors help reduce insurance rates.

Installation of dependable compressed air power source is quick and easy—when you choose the packaged Gardner-Denver WB compressor. Foundation requirements are no problem. Just move the unit in . . . hook it up . . it's ready to go. Compact and efficient, the WB provides high air output from a small corner of the mill. Send for Bulletin WB-10.

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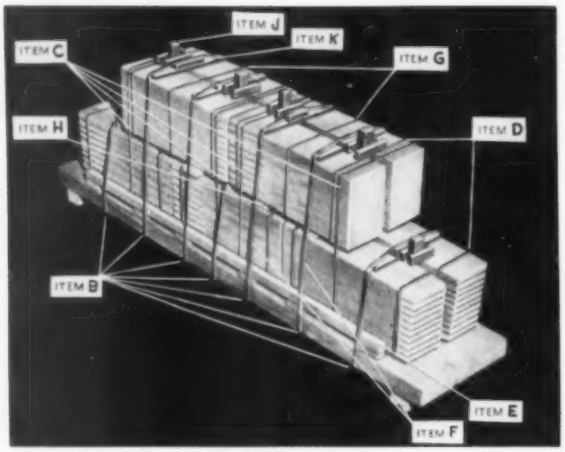
THE Lumberman

NUMBER 7

JUNE, 1956



VARIATION OF system used by Southern Pacific is illustrated on model. Cascade Lumber Company, Yakima, Wash., shipped lumber from Goldendale to Yakima with this method. Signode strapping was used. Elements of strapping are identified in the accompanying legend.

Stakeless Load Specifications

Item	No. of Pieces	Description
A.	Brake Wheel Clearance.	See Figurt 2. (AAR pamphlet MD-3)
B.	2 per each pile on top half of load.	¼" x .035 high tension band. Pass through stake pockets and seal at least 18" above pockets and on top, or side, of load. Locate a minimum of 3' from end of pile. Stake pocket protectors to be used to protect band at stake pockets. Strap on center of bottom pile to be located as near center of pile as possible.
C.	2 per pile.	¾" x .035 high tension band tensioned and sealed. Encircle entire load and locate so each band will enclose one end of top half of each pile and one end of bottom half of each pile. Corner protectors used at all corners.
D.	2 per package	¾" x .035 high tension band — package bands — tensioned and sealed about ¼ of the distance from each end of package for all lumber 10' and longer. For 8' lumber use one band for package centered.
E.	2 per Item F.	2" x 4" guide rail nailed securely on top at each bearing piece with two 16D nails. Locate as close to load as possible.
F.	2 per pile	2"x4" floor bearing pieces, preferably rough, in one piece. Length must extend beyond lumber at least 4". May be of a larger size providing they are 2" wider on seating face than in height. If larger lumber is used they may consist of two pieces nailed together with not less than 6 nails clinched on back. They must be of equal height and must be nailed to deck of car with 4 16D nails.
G.	1 per each top half	¾"x.035 high tension band centered and encircling top half. Use corner protectors at all corners .
H.	2 between each layer, per pile.	Separators, preferably rough, must be at least 4"x 6". They may consist of two pieces nailed together with not less than 6 nails clinched on back. They must be of equal height and twice as wide as they are high. Locate about 3' from end of piles.
J.	"T" block.	May be either 2"x4" or 1"x6" but must reach from car floor to top of load.
K.	1 per item B.	Truss.

NOT YET AAR approved is this stakeless system of shipping 8 foot material (in left photo). This method is being tried by the Southern Pacific Railroad on its own line. Steel strapping secures load to the flat car.

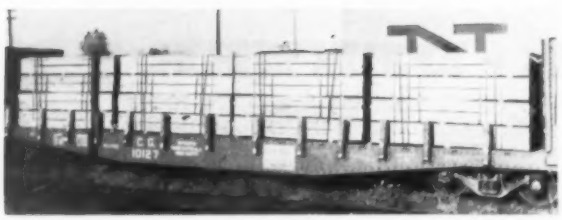
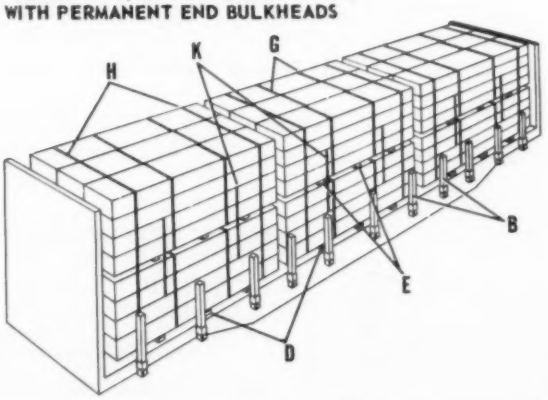
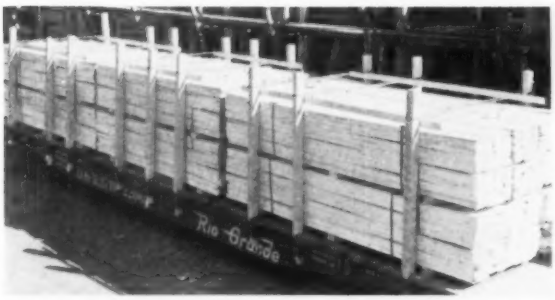


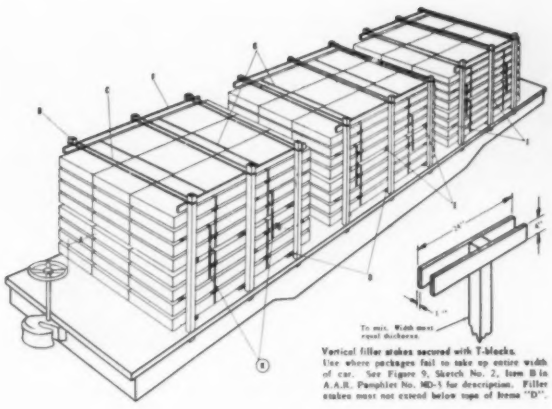
DIAGRAM FROM ACME Steel Co. bulletin explains bulkhead loading. This is not AAR approved. Left, wrapped lumber bulkheaded land. BELOW, UNWRAPPED bulkheaded load of lumber uses short stakes.

CARLOADING, FLAT CARS EQUIPPED WITH PERMANENT END BULKHEADS





AT RIGHT, INTERLACE band method of loading flat cars, developed by Acme Steel and AAR approved, permits substitution of Item K (interlace) for Item H. Car above used system, was shipped from Colorado to Chicago; arrived in excellent shape. Strapping and damage cost $2.06 per M. Lift truck unloaded the car in one hour.


To min. Width meet equal thickness
Vertical filler stakes secured with T-blocks. Use where packages fail to take up entire width of car. See Figure 9, Sketch No. 2, Item B in A.A.R. Pamphlet No. MD-1 for description. Filler stakes must not extend below tops of Items "D".

Builders Demand Unit Handling

Interest grows in wrapping and strapping lumber packages for cross-country shipment

PACKAGE-CONSCIOUS LUMBER consumers may soon force a revolution which will drastically change current lumber sorting and lumber handling, shipping and retailing practices.

That's the prediction made by some merchandising-conscious industry men. They eye America's swing to mechanization and improved materials handling with growing concern—and look (with considerable embarrassment) at some of the antiquated methods still used by the lumber industry.

Soaring stumpage prices, increasing labor costs and mounting tax burdens are nibbling away at the narrowing profit margin involved in lumber manufacturing. There now is a real need for studying how lumber is handled and shipped to market.

The competitive picture in building materials is forcing the issue. A lengthening list of building products is now available in **unit** loads—gypsum board and lath, asphalt and asbestos roofing and siding materials, insulating and fiber board products, plywood, brick, drain tile and hardwood flooring.

Industrial packaging now is out of the added cost classification and in a category of its own in planning and cost analysis. Industrial packaging, say smart managers, offers an unexcelled merchandising and public relations tool.

WHERE DOES LUMBER STAND in this picture?

"The filling and shipping of lumber orders hasn't changed much since grandpa's days," says one industry man. "Each order is a tail-made operation requiring handling piece by piece. It is graded, sorted, scaled, loaded, tallied and unloaded piece by piece. A typical box car shipment of about 30,000 board feet may have 30 separate items. It takes about 24 man hours to load and another 24 man hours to unload this car. Workers are paid a piece rate.

"The grocer can't buy six cans of corn. He has to buy a case. The case in the canning industry has become a **production** unit small enough so that it permits **production methods** in packaging, handling and settling," testifies this producer and retailer.

The authoritative 1954 Stanford Research Institute Report predicts that lumber consumption will be only moderately upward through 1975, increasing from the 1952 level of about 38.2 billion board feet to about 41 billion board feet by 1975.

It also states that "lumber demand would increase substantially if price relationships to competing materials

NORTHERN PACIFIC Railway (below) uses packaged lumber for own building material. Right, Ross lift truck loads packaged lumber.

Unit Handling Review

PORTCO CORP., Vancouver, Wash., fabricates Sisalkraft Fibreen covers. Left, merchandising covers. Above, covers for shipping.

stayed as they are." The price of lumber is expected to rise more rapidly than the prices of competing materials, but the pressure of competing materials and technological developments will restrain increases in lumber prices.

THE LUMBER INDUSTRY'S continued markets and future growth lies in the nation's building industry. In 1953 about 73 percent of U. S. lumber went into that end use. This proportion is expected to remain about the same in 1975. But plywood is taking away sheathing markets. By 1975 lumber is estimated to supply only 43 percent of this market, contrasted to 58 percent in 1953. The extent to which the lumber industry can keep its present markets and obtain new ones will depend on how alert it is to the current industrial revolution in home building.

In a recent Round Table jointly sponsored by HOUSE & HOME (Time Inc.) the Prefabricated Home Manufacturers Institute and the Lumber Dealers Research Council, this industrial revolution was explored, with constructive suggestions applying to the lumber industry.

In the report published by HOUSE & HOME, the following conclusions are made:

- "The building industry moves more heavy materials than any other industry except steel; it is one of the two main supports of railroad earnings.
- Exclusive of slabs and foundations, home building alone ships 30 million tons a year of products that go into houses above ground. Much of this is lumber.
- Most of these 30 million tons get shipped, stored and reshipped again as they pass from producer to fabricator to distributor to builder.
- Most of these 60 billion pounds are still picked up and moved, not once, but often 10, 25 or more times by hand.
- The more we cut Materials Handling Costs the more we can cut erection costs by building with parts instead of pieces.
- Materials handling costs can be cut 50 percent if manufacturers, railroads, car builders, truck builders, lumber yards, builders, prefabricators and materials handling equipment makers work together to develop and use the most economical means of handling materials from start to finish. Informed estimates suggest that more than 25 percent of today's home building cost lies in materials handling from mill to final erection.
- Builders and lumber dealers who do not take advantage of these savings will find it hard to stay in business.
- Building product manufacturers will find sales hard to hold against competition if they do not adapt their product and their packaging to the mechanization needs of their customers and distributors.

"But all this poses problems, among them:

- Should the lumber yard equip for mechanical unloading of freight cars before the mills are ready to offer unit loads on these cars?
- Should the lumber mills equip for unit loading, when only one lumber yard in ten is equipped to unload them?

Considering the unit package problem, HOUSE & HOME states:

- Handling costs can be cut by moving materials from first to last as "unit" loads, which combine hundreds of pieces in a single package.
- The materials should be packaged as unit loads by the Producers; carried as unit loads by the Railroads; unloaded, stored, reshipped and delivered as unit loads by the Dealers, and handled as unit loads at the site by the Builders.
- Today, only one lumber dealer in 10 is equipped to handle unit loads; only one box car in 8 has the wide doors needed for unit loads; only one producer in 100 is equipped to package and ship unit loads; only one builder in 1000 is equipped to receive unit loads.

How big and heavy should the standard unit load be? These are some recommendations:

However large the unit load from the mill may be, it should be packaged in multiples of smaller units of 1000 pounds or less. If this is done:

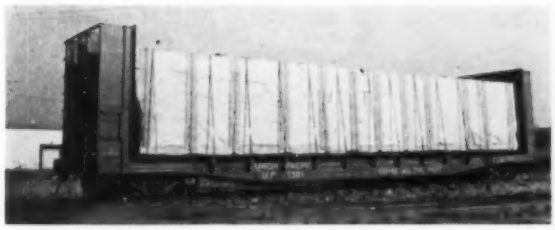
- lumber yards with cramped space or poor surface can use small lift trucks;
- more builders and lumber dealers will mechanize their materials handling, using less expensive equipment;
- quantities used of any one item on a house are relatively small, and small loads spot easier.

HOUSE & HOME states that the reluctant lumber mills give five reasons for not mechanizing now. Until the lumber mills work with the others concerned and unit load their products, there will be little chance to realize the full value of mechanized materials handling.

"Here's why the lumber mills have been laggard in unit loading and handling:

- They have been able to sell everything offered without bothering to package it better.
- They have had a good piece work deal under which two men working together load lumber by hand for about a dollar per thousand board feet.
- They might have to invest up to $80,000 per $1,000,000 of annual sales in equipment and plant changes needed for mechanized unit loading. The older the mill, the bigger the investment.
- Because few lumber yards are equipped to receive unit loads, it may be years before the mills could make full use of their unit-loading investment.
- Only one order in 10 comes in susceptible to unit loading. The lumber dealers say they could, and would, change their ordering system if the mills gave them any incentive or encouragement."

FABRICATING A 54-foot tarpaulin for Georgia-Pacific Plywood Co. at Portco plant. Covers are available in a wide variety of sizes.



EXPERIMENTAL PLYWOOD SHIPMENTS. In left photo, Sisalkraft wrapped, strapped load on bulkheaded car, shipped by U. S. Plywood Corporation from Anderson, California to New York City, with Acme Steel strap. In right photo, a test shipment made from Coos Bay, Oregon, to California, using Signode steel strapping. Wrapped shipments of plywood are still in early development stages.

Lumber Industry Considers Package Handling

Increased interest has shown up in recent years in the nation's lumber mills in packaging, strapping, shipping and distributing lumber in unit packages. This first appeared in handling lumber for water shipment, where extra cargo space and protection could be gained and loading speeded up. Since the end of the war packaging has been tried on railroad shipments, which handle about half of the output of the nation's lumber mills.

Packaging interest is due to:

- Modern handling methods.
- Efforts of the railroads to improve lumber shipping conditons and to relieve box car shortages in certain areas.
- Shipping specifications established by the Armed Services.
- Demand of wholesalers and retailers for packaged, unitized lumber.

GREEN AND DRY LUMBER may be handled in unit packages and shipped either in the conventional box car or in open flat cars. Green material usually is shipped in steel-banded packages in open cars without protective covering in transit. Dry material involving high-grade kiln dried stock must be shipped either in box cars, as most of it has been, or under protective wrap or covering on open cars to eliminate the grime of travel which will permeate the entire package.

In this article, THE LUMBERMAN is concerned primarily with shipping lumber in open flat cars, with or without protective covers, according to whether the material is green or dry. Principal emphasis will be upon kiln-dried stock shipped on open cars with protective covers.

Existing methods of handling lumber in box cars have been improved by some companies. Usually this involves special strapping into packages, and special handling by lift trucks (THE LUMBERMAN, pg. 84, April 1956).

The Intermountain Lumber Company, Missoula, Montana, currently is experimenting with compartmentalized cars and also with unitizing and shipping in double door automobile box cars.

Protection afforded by enclosed box cars was needed until dependable waterproof coverings could be developed as satisfactory and economical. Such materials have now been developed and permit open flat car shipments.

MANUFACTURERS OF 2X4's and other dimensional materials pioneered among western mills in strapping their product in uniform packages and shipping it in open cars. This, of course, was green material. Usually the only protection given was an end coating of some type. Strapped loads were placed on cars in accordance with standards specified by the Association of American Railroads, involving the use of stakes and cross banding with steel straps.

It is estimated that 70 percent of the lumber volume moved to retail lumber yards is stored outdoors. This degrades otherwise high-grade lumber and results in a poor-looking, inferior product.

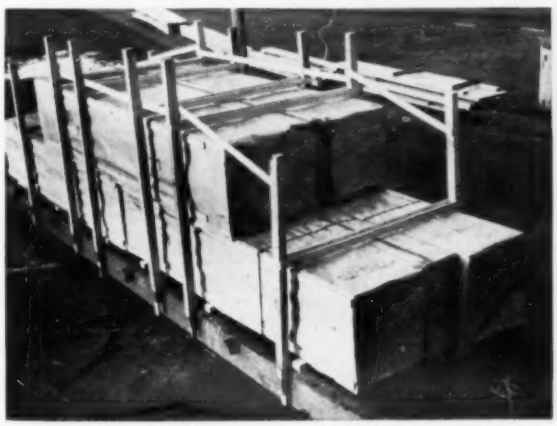
Advantages of shipping strapped, covered packages of kiln dried lumber in open flat cars are:

- The flat car can be loaded in about three man hours instead of 24 and unloaded in from 45 minutes to 1¼ hours instead of 24 hours.
- At delivery end, lumber packages can be stored in an outside yard area without roof protection. This saves cost of building and maintaining sheds.
- Full use can be made of mechanized fork lift equipment.
- Lumber can be sold clean and bright, which creates better customer acceptance.
- Lumber covers can be imprinted with the company name, offering an advertising medium while in transit, in the yard and on the building site.
- Lumber covers are reusable.

A RECENT SURVEY SHOWS that in Oregon, Washington, California and Idaho about 300,000 cars of fir and 200,000 cars of pine are shipped annually. Approximately 30 percent of the fir is green and would not require protection. Thus, about 350,000 to 400,000 cars annually are the potential which could be worked on as being convertible in part to open car shipments.

This should not be construed as alleviating the box car shortage, which becomes critical in certain areas. If there were a mass changeover to flat cars, the supply of that type of car would disappear rapidly. Southern Pacific, for instance, has about 5 box cars for every flat car on its line.

A lumber mill under today's railroad regulations can not merely order a flat car, strap the lumber into packages, cover them with paper and ship any place in the U. S.



WESTERN PACIFIC Railroad is shipping experimental loads of car lining and other items from Longview, Washington, to its supply center at Sacramento, Calif. This is not an AAR approved loading system and must travel under a special permit.

Unit Handling Review

Railroads Face Problems In Prescribing Rules

All movements of lumber which involve an interchange between two or more railroad lines are regulated by the Association of American Railroads, through its Special Committee on Forest Products Loading.

In Oregon and Washington 80 percent of the lumber produced goes to other parts of the country, and comes under the jurisdiction of the AAR. In northern California, which has an advantageous freight rate to southern California, 40 percent of the production stays within the state and travels on one line. The railroads, therefore, need not comply with the AAR regulations.

The AAR is cooperating with the retail lumber dealers, the mills, the lumber cover fabricators, and the steel strapping companies in testing and approving standard systems of loading which can be approved for transcontinental or interchange shipment.

THE REGULATIONS THAT apply are published in the booklet MD3 "Rules Governing the Loading of Forest Products on Open Top Cars." Shippers desiring to deviate from these rules, or desiring approval of a method of loading not now covered by the rules, must procure authority from the AAR to make experimental shipments.

Currently approved for open car lumber shipments are the Figure 6, Figure 7, Figure 9 and Figure 9A methods. These are all staked loads. Figure 9 and 9-A loading apply to packaged lumber. Paper covered packages have not been approved by the AAR, but there have not been any objections, provided the loading was done in accordance with Figure 9 and 9-A regulations. There has been some questions raised on the fire hazard involved with use of paper.

To date, the AAR has rejected all stakeless loads. Principal reason cited is safety. The railroads have not yet been convinced that stakeless loads are secure enough to prevent throwing out lumber on a curve at high speed, on sudden stops, etc.

Southern Pacific has made a special recommendation to the AAR for a stakeless lumber load which utilizes steel strapping for the individual packages, the units made up of packages, and for securing the entire loads to the open car by strapping to the stake pockets. This applies to the shipment of 8 foot studs. The SP railroad has been testing this method on its own line.

The proposed car will contain 22 units 8 feet long, 4 feet wide and 3 feet, 3-¾-inches high. This car has approximately 36,000 board feet; units weigh approximately 3900 pounds. Strapping required is as follows: 11–1¼ inch space x .050 stake pocket bands; 12–¾ inch x .035 unit bands; 22–⅝ inch x .020 package bands. The Cascade Lumber Co., Yakima, Wash. has used with success a variation of the Southern Pacific on lumber shipments from Golderdale to Yakima, Wash. This involves no interchange

THE RAILROADS HAVE TAKEN other steps. Southern Pacific has purchased 1500 box cars with 15 foot doors. It is not known as yet how helpful these cars will be to lumber mills, because not many are in use. Because considerable lumber is 16 feet in length, the use of these cars may be limited. A 20 foot doored car is also being tried.

Speaking bluntly, some industry spokesmen say that if the railroads don't take steps to adapt their equipment and techniques to mechanized loading and unloading, lumber shipments by truck will continue to increase. The truck-trailer combination lends itself ideally to lift truck handling of loads. In certain areas, it is claiming a high percentage of shipping volume. It costs about $50 to load and $50 to unload a box car; a truck can be loaded and unloaded for about one-tenth of that cost.

According to HOUSE & HOME, these spokesmen say that: "with the right equipment, properly loaded, railroads could carry 10 percent more lumber in a box car and at least 20 percent more on a flat car than today's average of around 25,000 board feet. They could cut the no-income time while cars are being loaded and unloaded from two days at each end to less than an hour; they could run all cars night and day; they could reduce damage claims.

"The railroads could quote incentive rates that would make it cheaper to ship cars of not less than 75,000 pounds unit-loaded than it is to ship smaller carloads loose-loaded. A 10 percent freight differential would make it profitable for all mills and lumber dealers to mechanize overnight for unit loads.

"Seventy-five percent of all lumber could, and should, be shipped on flat cars—compared to less than 10 percent today. Green lumber will benefit from being in the open. With proper loading, kiln dried lumber should be able to travel safely protected only by a shroud of waterproof material.

"TODAY MORE THAN 90 percent of all lumber is loaded loose into box cars, so loose that it is often badly impacted, requiring two men four hours to get out the first pieces. The 5 to 10 percent that travels on flat cars is loaded loose and then strapped top and sides to hold it."

Bulkheaded flat cars are better suited to open car loading, because three foot stub stakes can be used instead of long side stakes. However, there are relatively few cars of this type in circulation and these are assigned primarily to U. S. Gypsum. To interchange these cars poses problems and requires special permission. Railroad spokesmen favor the bulkheaded car for package loading of lumber and state that it is a car which can handle 95 per cent of commodity shipments. It is expected that this method of shipping will be written into the AAR rules by the end of 1956 as approved for transcontinental use, based on tests made by Sterling Lumber & Supply Co., Chicago, Ill.

In 1955 some 50 experimental shipment on permanent bulkhead cars were made by a shipper and receiver of lumber in the south and midwest. The packages were individually tied at two locations; all packages in the lower tiers tied together as those in the top tier. All packages are then tied into a single unit with overall and interlaced ties. These cars came through in excellent condition. (See THE LUMBERMAN, January 1956).

John Moeling, of Sterling Lumber & Supply Co., Chicago, Illinois, outspoken advocate of unit loading of lumber proposes that an industry-wide committee work with the AAR in bringing about changes in shipping practices. The nucleus of this could be the Materials Handling Committee of the National Retail Lumber Dealers Association. This would pool the common knowledge of steel strapping companies, lift truck manufacturers, lumber mills, lumber cover manufacturers and retailers.

SISALKRAFT WRAPPED car lining in a Longview, Washington, mill, ready for shipment.

Steel Strapping Companies Pioneer In Research

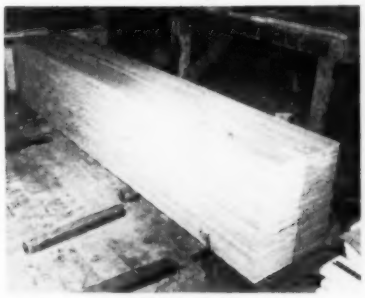
Steel strapping manufacturers have put a lot of money into basic research to secure lumber loadings that do little or no shifting in transit. Principal companies interested in unitizing lumber loading are Acme Steel Company, Signode Steel Strapping Company and Gerrard Steel Strapping Division of U. S. Steel Corporation.

Basically, steel strapping companies

Unit Handling Review

Photos Show Process of Covering Lumber Packages With Paper Shrouds

STICKERING the load with 1 x 4's.



FINISHED load is ready for paper cover.

PUTTING ON paper corners with Permacel.

◀ THE PREFABRICATED Sisalkraft cover, made by Portco, is placed over the lumber load by two men.

LOAD IS covered, ready for strapping. ▶

APPLYING bottom sticker before banding.

Picture sequence shows 1x24 inch NuLoc car lining, in 18 and 20 foot lengths, being paper covered at Weyerhaeuser Tbr. Co., Longview, Wash., for flat car shipment to Western Pacific Railroad, Sacramento, Calif. Prefabricated Sisalkraft covers were used. Permacel tape used on cornerrs. Acme steel Unit Load Band on packages. 4400 bd. ft. per package, which is 42 inches wide. 1x4 sticker halfway up in load for band interlace.

STICKER in place. Note protective corners.

CINCHING DOWN the Acme Steel Unit Load Band on last of two bindings. Paper is not used on the bottom of the package.

FINISHED PACKAGE is ready for pickup by overhead crane. Nine packages: 6 fulls, 3 halves; were put on flat car with lift truck.

Unit Handling Review

HYSTER 150 (15,000 lbs. capacity) pneumat'c lift truck with side shift and tilting apron, puts lumber package on lumber tree in yard. Trees give retail dealers extra storage area.

STANDARD 4-wheel drive Hough Payloader modified with dual front wheels, and lift mast.

are pushing for stakeless flat car loads, because they permit more successful ues of lumber covers and because they consume more steel strapping. Both Acme and Signode have been active in making on-line tests, but neither is active on transcontinental work pending AAR approval.

Substituting steel straps for car stakes is good business for the mills, too. Stakes cost about $1.25 each and, on a car with 30 of these, that isn't pin money.

The shipping of lumber packages in open flat cars is basically a steel strap project. Much of the credit for proposing new ideas to the AAR should go to the strapping people, who have been aggressive in promoting new techniques.

UNDER EXISTING AAR RULES Governing the Loading of Forest Products on Open Top Cars, only staked loads of packaged lumber are allowed on interchange shipments. The methods prescribed are fully explained and illustrated in AAR's Pamphlet MD-3 and supplements thereto.

Figure 6 and Figure 9 loadings relate to shipment of lumber. Figure 9 relates to shipment of packaged lumber. Figure 6 utilizes strapping for load securement, but does not use strapping on individual packages.

As a result of experimental loadings and tests carried on by Acme Steel Company the AAR, as of July 29, 1955, accepted a revision of the basic Figure 9 loading system, permitting the substitution of Item K for Item H in the rules. Briefly, this involves the approval by railroads of an interlace band method developed by Acme and tested succesfully. This method can be used on covered or uncovered lumber packages and currently is the only approved system for interchange shipments of packaged lumber.

Acme Steel Co. has published a 28-page illustrated booklet which explains in detail the steps in the Figure 9 loading method, including the interlace band method. It also outlines the carloading of flat cars equipped with permanent end bulkheads, a method not yet approved by the AAR.

The Signode Steel Strapping Company has been working with various manufacturers of covering material, both paper and plastic, with the objective of shipping open top cars of high grade material from the forest products industry. The work has been experimental only and has not been approved by the AAR or lumber and plywood associations. Currently, Signode is furnishing strapping and technical assistance on test loads moving on one line only.

WHAT DOES IT COST to strap unit loads?

There is no figure which will apply to all conditions. Generally, strapping and labor will run from $1.50 to $3.00 per M board feet, depending on production methods and facilities for bundling and loading units on flat cars.

The strapping materials (band and seals) would average from $0.50 to $0.75 per M board feet, for both packaging and bracing. This is based on using 1¼ inch x .035 for both purposes, although the AAR rules permit a lighter band cross section for unitizing lumber.

Lumber Cover People Develop Wrapping Materials

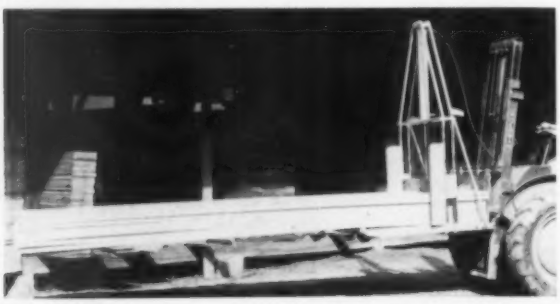
Lumber covers on unitized lumber loads offer several advantages:

- Protect the lumber in transit from grime and dirt. Product can be advertised as a packaged and protected product.
- Lumber arrives in prime condition.
- End checking, cupping and warping are minimized.
- At destination, the unit package can be moved directly to its storage area in one operation, avoiding demurrage charges.
- The covered package can be stored in the open and moved subsequently to the building site or lumber can be sold from the package.
- Lumber downgrading due to exposure is minimized.
- The cover permits imprint of the company name.

LUMBER COVERS CAN BE applied on packages for in-transit shipments or used by the retailer alone at the receiving end, as merchandising covers. THE LUMBERMAN is concerned here primarily with covers used for in-transit shipments.

At the present time, based on field experience, the only type of cover that can be recommended is one fabricated from asphalt laminated reinforced waterproof paper with a wet strength kraft sheet used as the outside sheet.

Other types of materials, such as polyethylene and flat unreinforced waterproof paper, have been used, but do not give the same high degree of

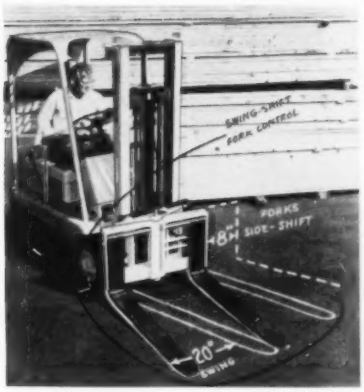


SHERMAN FORK lift truck equipped with M. H. End Loader.

SWING SHIFT attachment shown installed on a Yale truck.

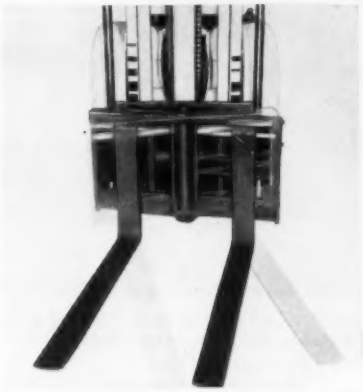
Unit Handling Review

Accessories Make Lift Trucks Versatile Loading Units

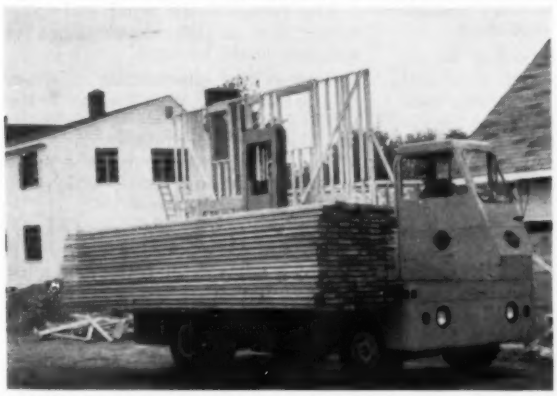


SWING SHIFT and Swinging Apron.

LOAD IS jockied with Swing Shift.



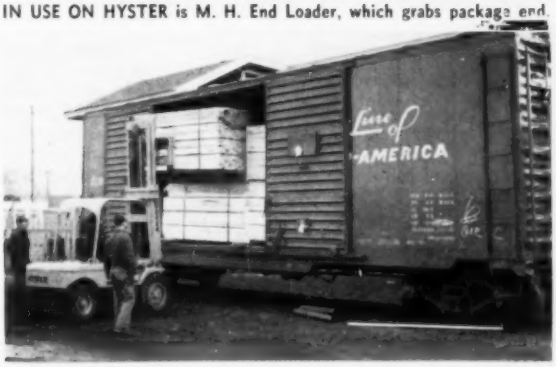
ALLIS-CHALMERS adjustable side shifter.



BAKER-RAULANG side-loading Traveloader works in narrow aisles.

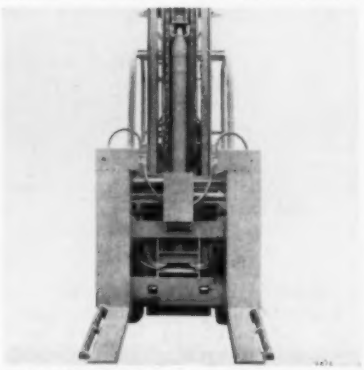
IN USE ON HYSTER is M. H. End Loader, which grabs package end.

HJ MODEL Hough Payloader is efficient lumber package handler.



HYSTER YC-40 lift truck, with hydraulic side-shift carriage.

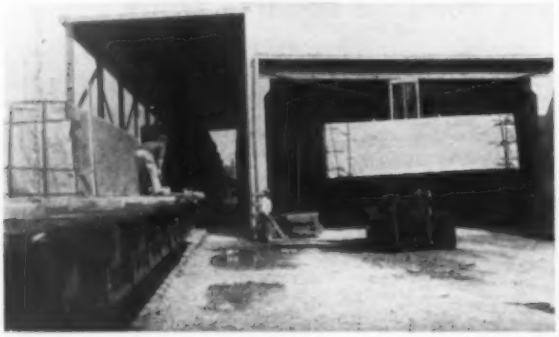
EXTENSION FORKS on Hyster RC-150.



TOWMOTOR ROLL-Off accessory close-up.

SHOWING sideward action of Roll-Off unit.

Unit Handling Review



HYSTER LIFT TRUCK brings wrapped package from wrapping shed to loading station at Oregon Alder-Maple Co., Williamina, Oregon.

SLIDING WRAPPED package to opposite side of flat car with Hyster 150 lift truck, with Swing-Shift at Oregon Alder-Maple Company.

protection and performance.

Disadvantage of using polyethylene for in-transit shipments include: poor scuff resistance; inadequate breathing properties which induce harmful condensation; some disintegration under hot sun; can be damaged in application; cost is more than paper; theft of portions of the wrapping material while in transit, permitting exposure to weather. It appears better adapted for use as a lumber cover at the receiving end.

Principal paper used today for lumber covers is Fibreen "220", manufactured by the American Sisalkraft Corporation, San Francisco, Calif. It is available in rolls from 3 feet to 8 feet wide, in blankets up to 26½ feet wide or as custom-made covers. The product is available nationally.

Fibreen employs a 30 to 35 pound base weight kraft paper. It is waterproof, has good strength, is pliable, has durability and is offered at low cost.

Fibreen covers are now available as prefabricated shrouds or covers, in a variety of ready-to-use sizes. In the western states these are manufactured by Portco Corporation, Vancouver, Washington, in the sizes indicated elsewhere in this article. They are also available from other fabricators.

Previously, users of lumber covers bought the material in roll form and made up the covers themselves, sealing over the ends. This did not always prove satisfactory, because the 8 foot rolls did not cover all package sizes. The ready-made covers simplify the package covering procedure and are now becoming accepted.

FIBREEN HAS BEEN FOUND generally satisfactory. On test shipments made during the past cold winter, mills reported some brittleness developing, with a resultant break-through. If this becomes a problem, paper companies may use a resin laminate, which is more expensive.

Fibreen covers add about $1.00 per M board feet when applied in roll form and $1.50 per M in prefabricated sizes, to the cost of unitizing lumber. The difference in cost is made up in ease of application. Instructions for using Fibreen are available in an illustrated booklet published by American Sisalkraft Corp.

The future of all types of lumber covers lies in the development of stakeless loads, because:

- Savings and eliminations of stakes (at $1.25 each) are attractive to the mill.
- Stakes tear paper protectors.
- Staked loads are purposely made floating, shifting loads, which are hard on lumber covers.

Succesful use of lumber covers demands an immobolized load, or if shifting is allowed the entire load must shift as a unit.

Experimental work is being carried on by the Western Waxed Paper Division of Crown Zellerbach Corporation on another type of lumber cover material on which no data are available currently.

The G. M. Stewart Lumber Company, Minneapolis, Minnesota, in shipping strapped lumber on open cars, used a Lum-br-cote protective material. Strippable material was applied by spraying; non-strippable material by vat dipping.

Material Handlings People Urge Unit Loads

The fork lift truck, with and without accessory equipment, is the mechanical muscle that can effect up to 75 percent savings in handling unitized lumber loads. It is the motivating machine that has stirred up all the interest in mechanized materials handling.

Officials of 85 firms were interviewed at the National Retail Lumber Dealers Association Convention in Cleveland, Ohio, in October, 1955.

APPLYING PERMACEL waterproof tape to "hospital folds" of Sisalkraft Fibreen on unit.

- 51 percent had fork truck equipment.
- 36 percent used fork trucks to unload incoming cars.
- 46 percent wanted to receive carloads of strapped lumber for fork truck unloading.
- 46 percent wanted to receive wallboard in strapped bundles.
- 42 percent wanted to receive palletized hardwood flooring.
- 39 percent wanted to receive palletized shingles.
- 38 percent wanted to receive plywood in strapped bundles.

THE RETAIL DEALER IS receiving other building materials in unit packages and purchased his fork truck equipment to handle it more efficiently. He isn't getting full value from that equipment if one of his building materials still has to be handled piece by piece.

Lifting equipment with a 6000 pound capacity is being recommended. Dealers frequently can recover the cost of such a unit in a year.

The fork lift truck manufacturers are not idle. Available today is a basic line of equipment (see THE LUMBERMAN, October 1955) adapted to general package handling, either on open or box cars.

In addition, THE LUMBERMAN presents here a listing of specialized equipment adapted to package handling. Complete specifications are available from the manufacturers.

SWING SHIFT MANUFACTURING COMPANY, P. O. Box 111, Longview, Wash.

Manufactures the **Swing-Shift** and Side Shift units for automatic lift trucks. This unit can be purchased on new equipment at the factory or installed on machines in use.

The Swing-Shift patented principle of pivot-

(Continued on page 108)

TOP MEN AT POWELL RIVER Co.'s Aero Camp, B. C. show. From left: TOM MURPHY, mgr. of Queen Charlotte logging operations; STAN STEWART, woods foreman; GEORGE "PANICKY" BELL, super.; W. C. R. JONES, V.P.; JOHN LIERSCH, V.P., HAROLD S. FOLEY, board chairman.

Trucks Replace Railroad

British Columbia operator transfers activities and converts to truck show

WHAT HAPPENS WHEN a big logging company decides to convert from rail to truck, pull up stakes at one major camp and gradually transfer equipment and operational activity to an entirely different location —and accomplish the whole program without interrupting the orderly flow of logs?

The answer, in the case of Powell River Co., is simply this: Plenty!

Powell River Co. is not only British Columbia's biggest newsprint producer; it is a logging giant, too, with several camps supplying logs for its sawmills in the New Westminster district as well as for the paper mill at Powell River.

Ever since the war years the company has been operating a good-sized logging show at Aero Camp, at the head of Cumshewa Inlet on the Queen Charlotte Islands, off the British Columbia coast. And long before that, other owners were logging there extensively, with 20 miles of railroad as well as a network of truck roads. More than 800 million feet of logs have moved over that railroad.

But with only about 50 million feet of timber still waiting to be logged there, Powell River Co. decided to rip up the tracks and convert Aero Camp, for the remainder of its days, into a trucking operation, and gradually to set up a new and bigger camp in Skidegate Inlet, at Alliford Bay. Here the company not only has access to another great stand of timber, running heavily to spruce and hemlock, but it has a ready-made camp built as an air base during World War II.

WHILE THE ALLIFORD Bay area was being prepared for the loggers' invasion, Aero Camp is not only being converted from a rail to truck show; it was also being prepared for a final shutdown when the last of the readily accessible mature timber has been logged. The time table is a reasonably flexible one—nearly two years may elapse before Aero is abandoned — until another timber crop grows—and Alliford Bay is operating at full scale.

The problem has been to arrange for a gradual transition so that the flow of logs may be maintained with a minimum of disruption, and the equipment and other facilities transferred to the new base without a break in the orderly production schedule. Norman English, general manager of logging, and Tom Murphy, logging manager for the Queen Charlottes, as well as a corps of lower-echelon operators, and John Liersch, vice-president in charge of timber and forestry, have their task cut out for them.

Already, most of the preliminary work has been done. Aerial and ground cruises of the timber that will eventually move out to Alliford Bay on truck roads yet to be built, have been built. A substantial crew has been busy locating roads, making due allowance for the land's contour and grade conditions and the best location for settings and loading points.

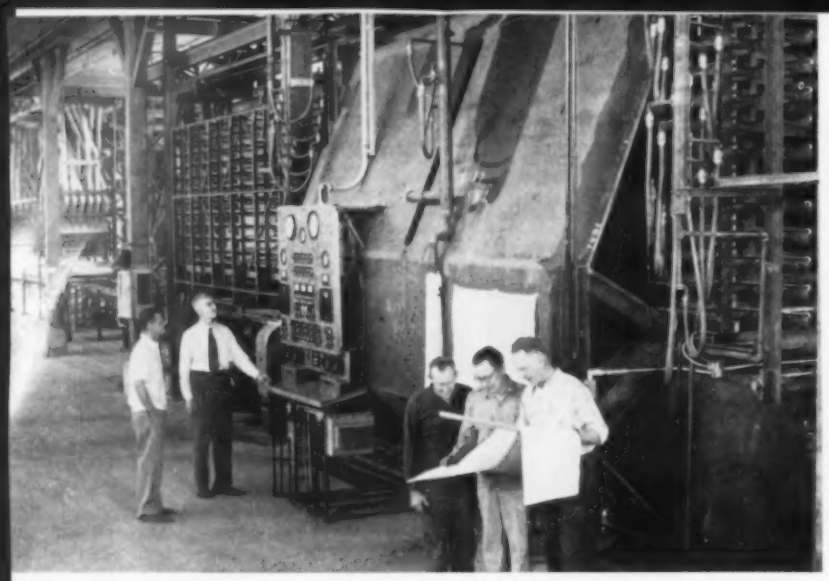
Meanwhile Aero Camp has been organized for its brief new role as an all-truck operation. The company has an impressive array of equipment to complete the job. There are, for instance, four cold deck machines in action—a Clyde yarder powered by a 300 h.p. Cummins diesel; Washington yarder with 300 h.p. Buda; a Smith & Watson with 400 h.p. Cummins, and a Skagit BX-200 with 275 h.p. Cummins, all of them equipped with Gearmatic transmission.

LAST RAILROAD LOAD of logs reaches Aero Camp, hauled by Shay locie. Over 800 million feet of logs have passed over this railroad, which is now being replaced by a truck haul.

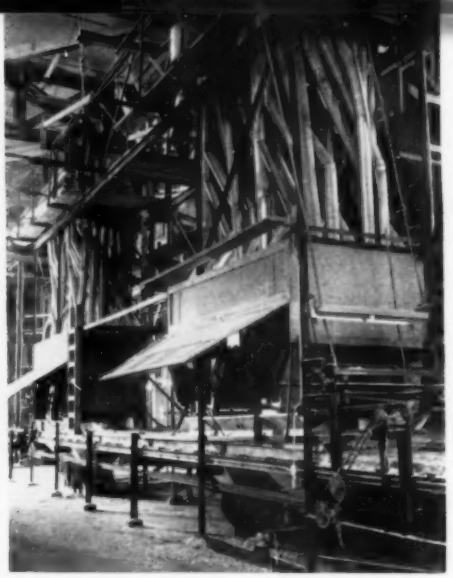
AS A TRACKSIDE MACHINE the company uses an old steam unit car mounted on two sets of shovel tracks. The machinery consists of a 12 x 14 Washington with 400 h.p. Cummins and Model 20 Gearmatic as the yarder, and an LS-70 Skagit swing drum loader. A second similar trackside machine is at present under construction.

The last load of logs was delivered to the dump by railroad Aug. 31, 1955, and to give the event appropriate ceremony Harold S. Foley, chairman of the Board, Powell River Co., was there in person, with Vice-presidents John Liersch and W. C. R. Jones, newly appointed head of public relations. Foley, assisted by Superintendent George "Panicky" Bell,

(Continued on page 139)



PORTION OF TENEX PRODUCTION line; four felters in background; press of unconventional design, foreground. JAMES d'A. CLARK, process inventor, Longview, Wash., with controls.



CAUL LINE START: each of two enclosures contains two felters fed by a maze of pipes.

INGREDIENTS for manufacture of Tenex. Far left: sawmill slabs and edgings are raw material. After debarking, they are sliced across the grain to make wafers in various widths, but with predetermined thickness. Wafers are covered with resin (small white pile) and petrolatum wax (in small cube) is added.

Waferboard

Key Personnel

Officers and key personnel of Pack Lumber Co. directly concerned with development and production of waferized board named "Tenex":
President: J. M. Brown, Jr.
General Mgr.: E. C. Wert.
Vice Pres.: D. L. Hayes, in charge of research and development
Tenex Plant Mgr: Wayne P. Long.
Plant Mechanical Supervisor: Kenneth Critchell.

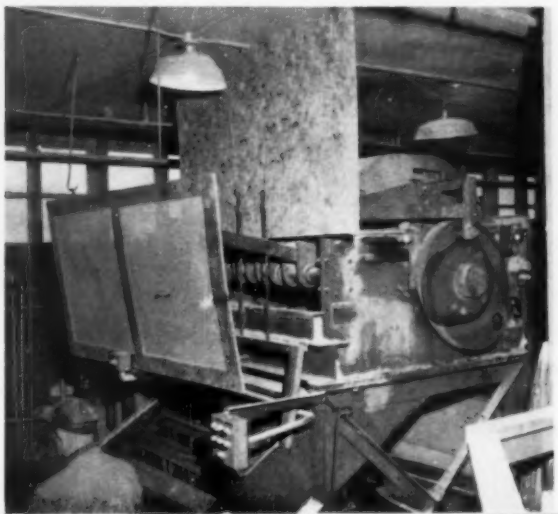
THE FIRST PLANT TO commercially produce wood composition board in the Inland Empire has inaugurated production on three-shift basis. The product—Tenex, a flake-type board developed and produced by Pack River Lumber Co., Sandpoint, Idaho, is the result of ten years research and development. The firm not only worked out processing techniques but developed specialty production equipment components, several of which were built in the company's own machine shop. Others were built to Pack River design by established machinery manufacturers.

The resultant 50-ton per day, dry-process board plant was built at a cost of over $1 million. It probably does not contain a single piece of complete, conventional production equipment. Where standard components are used, they work as segments of specially-built processing units.

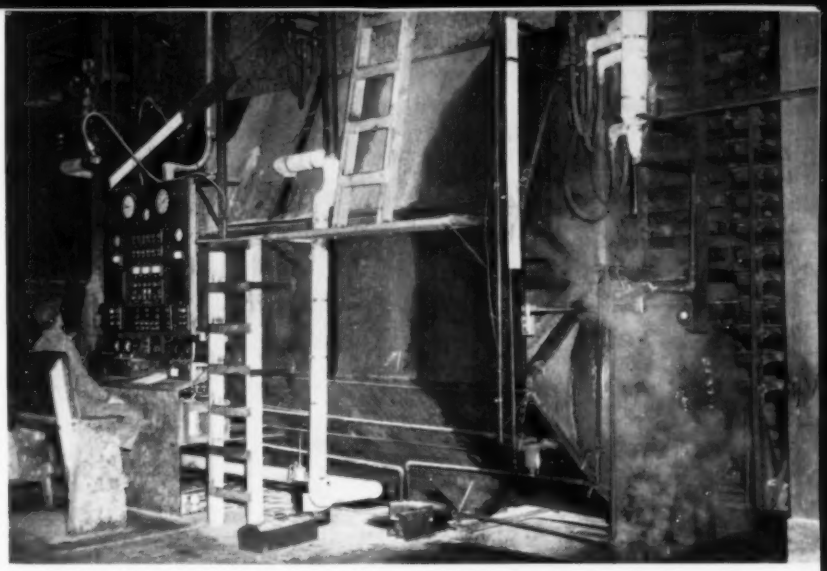
Pack River and associate lumber mills marketing through Pack River

HAND-FED DEBARKER designed by Tenex engineers takes bark from slabs and edgings. Gardner-Denver pump furnishes 1500 psi pressure.

BARKFREE WOOD ON inclined feed chain at lower left is converted to thin rectangular pieces in Jones waferizer with Ohio knives.



BOARD FROM CAUL separator drops onto saw table (left); Pacific knives cut board in half.



PRESS HAS ONE immense piston operated by water. Steam-heated platens have tem. from 208 to 405° F. Worthington pump is on low pressure tank; Wagner pump on high pressure tank.

Uses Cross Grain Chips

First Inland Empire particle board plant makes distinctive product

J. M. BROWN, JR. (left), president, Pack River Lbr. Co. and D. L. HAYNES, vice president in charge of research and development.

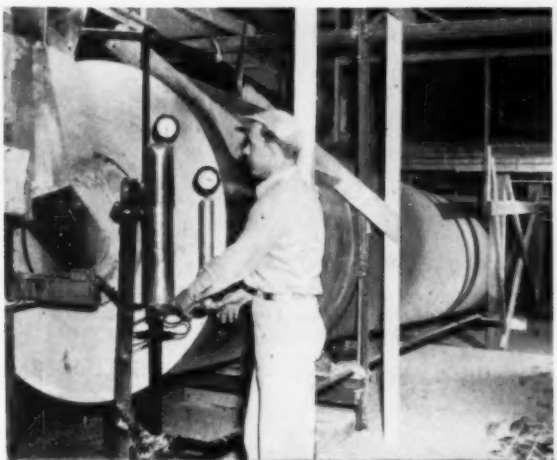
Tree Farm Products sales organization, Spokane, Wash., account for an important segment of lumber production in the Inland Empire. Pres. J. M. Brown, Jr., established a small research laboratory and experimental board plant at the company's Sandpoint operations in 1950. D. L. Haynes, now vice president in charge of research and development, headed the new section. Subsequent research and operations first established the practicality of a new dry board process, conceived by James d'A. Clark, Longview, Wash. consultant, and continued the work until the completed commercial process resulted.

Pack River's waferboard is produced from slabs, edging and trims trucked in from two of the organization's sawmills. These materials, which formerly presented disposal problems and costs, can now be extensively utilized in the new board product. Management feels that Tenex also opens possibilities for the future salvage utilization of additional forest materials, including limbs and other larger components of logging slash not suitable for lumber.

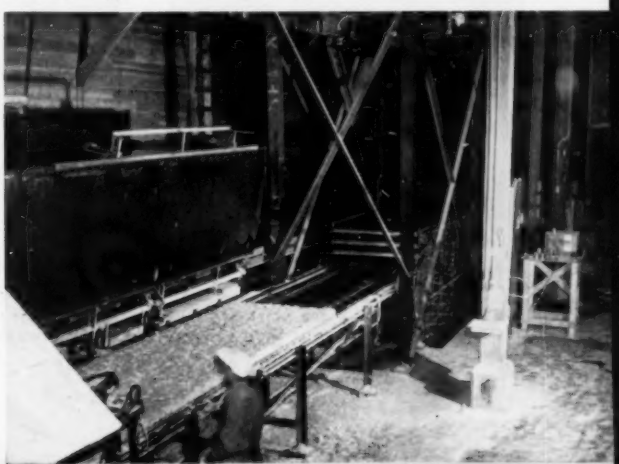
THE BOARD PLANT, built adjacent to Pack River's Sandpoint planing mill, obtans steam from the central boilerhouse which also serves the dry kilns. Construction of the new addition started in 1954 and was completed early this year.

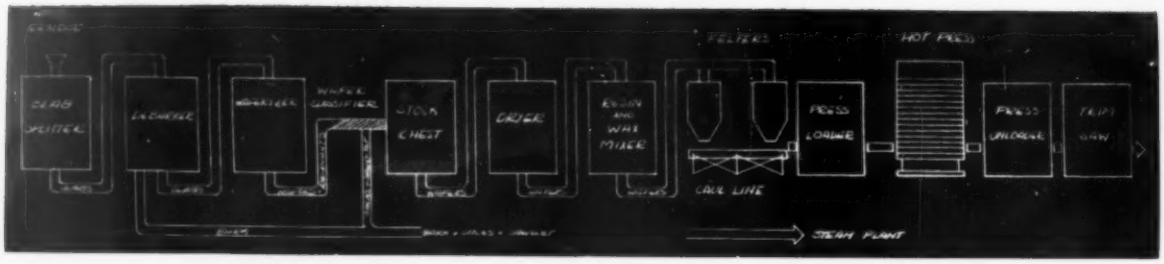
Sawmill salvage wood brought to the board plant is processed in two

UNION IRON WORKS mixer tumbles dried wafers. Omega meter puts metered amounts of Monsanto Resinox 673 resin and wax into mixer.



TWO CAULS AND "sandwiched" mat move into receiving elevator from caul flipper with Bruning cylinders and Racine solenoid valves.





FLOW CHART SHOWS Tenex process used by Pack River Lumber Company, Sandpoint, Idaho.

length classifications—pieces up to 2 ft. long and those of 2 to 4 ft. in length. Any longer than 4 ft. is "batch" sawed. Wood larger than 4x6 in. is reduced to this or smaller size by passing it through a modified lath bolter.

Pieces of wood with bark are routed to a hand-fed barker designed by Tenex engineers and built in the Pack River shop. The unique hydraulic debarker uses only 35 gallons of water per minute and has operating pressure of 1500 psi. A Gardner-Denver 10x3x10 pump delivers the debarking stream.

Bark-free wood goes to one of two waferizers. The one taking short wood was designed and built by Tenex. E. D. Jones & Sons built the waferizer taking long wood. The latter unit is equipped with 48 waferizing knives built specially for this job by Ohio Knife Co.

In that the thin, rectangular crosscut wafers are better when made from moist wood, the salvage material is processed only in that condition. When not naturally sufficiently moist the wood is sprinkled or tank soaked prior to processing.

WOOD MATERIAL FROM the waferizers first goes over classifying shaker screens, where fines and overlengths are eliminated, then to stock storage chests. Each of these three chests is a cylindrical unit 20 ft. high. Two have diameter of 20 ft., the other 40 ft. The wafers enter top of the chests, by gravity, from a center-mounted vibrating conveyor which continuously revolves in a horizontal plane. This loading system spreads the wafers out in thin stratified layers.

Each chest is equipped with a specialized "bucket" elevator for removing the stock perpendicular to the layers. Instead of conventional elevator buckets, these have long, shallow trough pick-ups which extended between center column and circular wall of each chest. In that the elevators operated in fixed position, the chests rotate to bring stock to the elevators. Intermittent rotation is provided by a Bruning hydraulic cylinder, activated by an electrically operated Rivett solenoid valve (furnished by Hydraulic & Air Equipment Co., Portland), which rotates the chest a few inches each stroke.

Belt conveyors receiving wafers from the stock elevators deliver them to a Proctor & Schwartz dryer equipped with Foxboro temperature controller and Minneapolis Honeywell recorder. It takes about five minutes to dry the wafers in this 40 ft. long 8x10 ft. dryer.

Dry wafers next go to a mixer—a

(Continued on page 141)

Unusual Press

The 4x16 ft. press, designed by Tenex engineers and built by A. O. Smith & Co., differs radically from conventional pressing units. It has a huge rectangular piston—4x16 ft., same size as the mats, and uses water as its hydraulic fluid. Weight of this press is much less than that of conventional presses. Consequently no special foundations are required other than those for the accumulator and discharge tanks beneath the press.

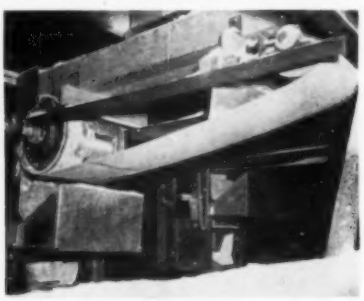
According to Jim Parsons, Pack River's director of public relations, the unusual press process incorporates the following advantages: Pressure is applied evenly over the entire area of the boards; pressure uniformity is not disturbed by structural or temperature strains; pressure of the actuating fluid (water with lubricants and rust inhibitors added) is little more than the pressure applied to the board, thus reducing costs of pumps, piping and control valves; nearly every ounce of steel in the press bears its full working load in tension when operating.

SHARPENING SPECIAL-built Ohio knives of Jones waferizer with Pope traveling grinder.

PLANT MANAGER W. P. LONG examines bucket elevator taking wafers from stock chest.

TENEX DISTRIBUTORS (left center); at right, portion of the dryer; at top center are ends of the two mixers made by Union Iron Works.

CLASSIFYING SHAKER screen takes wafers from waferizer (background). Sticks and fines are eliminated; wafers go onto a conveyor belt.



MAGNETIC PULLEYS (Dings Magnetic Separator Co.) remove tramp metal that might become mixed with resin-coated wafers.

1956-57 OFFICERS, from left: secretary-treas WALLY FONTAINE, Crown Zellerbach Corp., Port Angeles; vice chairman DAVE KURTZ, Aloha Lbr. Co., Aloha; retiring chairman A. H. HALEY, Pope & Talbot, Inc., Port Gamble; new chairman REID PRIEST, Priest Logging & Equipment Co., Port Angeles; Sgt.-at-arms ROBERT RHEINBERGER, Pope & Talbot, Port Gamble.

1957 PLANS FOR Olympic Logging Conference will be implemented by incoming chairman, REID PRIEST, right, who succeeds A. H. "GUS" HALEY, at left, this year's Conf. chmn.

"Adopt A Medical Plan"

Doctor advises Olympic Loggers to initiate an industry-wide program

HILLMAN LUEDDEMANN, vice president, Pope & Talbot, Inc., Portland, Ore., waxed optimistic over future of the lumber industry, even predicted new products will eventually be more important than the lumber itself.

PLEAS FOR BETTER state land management and for a uniform medical program for the logging industry were highlights of the 11th annual Olympic Logging Conference held in Victoria, British Columbia, May 3-4.

From an original meeting of only 10 men from the logging industry on the Olympic Peninsula, the Conference has grown to a membership of over 400 loggers, suppliers and their wives. This year's meeting was "homecoming" for OLC, which returned to the Empress Hotel at Victoria after two years at Harrison Hot Springs, B. C. The first eight conferences were held in Victoria.

A. H. "Gus" Haley, assistant manager, Pope & Talbot, Inc., Port Gamble, Wash., was chairman this year. He is succeeded by Reid Priest, manager, Priest Logging & Equipment Co., Port Angeles, Wash., who will head up the 1957 meeting.

KEYNOTER ATTORNEY GENERAL Don Eastvold showed that the state of Washington was in the timber management business in a big way, with an annual gross business running into many millions of dollars. He traced the background of conflicting interest and responsibility of the several state bodies which have a finger in the management of state lands.

Eastvold's suggested solution of the problem is to set up a strong central department of natural resources with trained foresters and other technicians for field men and administrators. As a check on the activities of the department, a board such as the present state land board would function, but only in the broad sense; such a board would not concern itself with the details of land management. Eastvold said retention of the land commissioner's office is not an issue in his proposal.

The attorney general's views coincide generally with those proposed, without success, by the Shefelman committee to the last Washington state legislature. Eastvold told the loggers that the people in Washington with the greatest interest in the millions of

BOARD OF DIRECTORS (L to r): A. H. HALEY, J. G. RUCKER, Simpson Logging Co., CARROLL MERCER, Buck Mtn. Log. Co.,; C. J. HOPKINS, Peninsula Plywood. (See box for complete list.)

R. E. SETH, M.D. Medical Programs.

DON EASTVOLD Management Reforms.

TED GOODYEAR Timber Sales Progress.

acres of state land should make known their ideas and get the next legislature to enact new laws for a reformed management of state lands.

OVER 30 LOGGERS, perhaps as many as 50, on the Olypic Peninsula are now using steel strapping for bundling logs, estimated Dick Jacobs of Signode Steel Strapping Co., Seattle, member of a panel on the advantages and disadvantages of strapping. He said the most-used size is 0.05 x 2″, although some 1¼″ wide strapping is used on small bundles. He indicated that a straight drop into water (of sufficient depth) is preferable to skidding a bundle of logs down a ramp of water, because the skids require extensive maintenance to keep them in top shape.

It takes seven minutes for drivers on his operation to band their loads with hand-operated mechanical sealers, reported A. A. Rhyne, Rhyne Logging Co. manager.

Norton Smallwood, Chas. H. Rasmussen & Co., wire rope house, Seattle, told of the technique in using cable straps for bundling full gondola carloads of logs, the advantage being that the cables are sent back to the woods for re-use.

Jacobs said it costs from 58 to 80 cents in expendable materials to strap 1 M board feet of logs. He said that 95 per cent of the strap used today is expendable. Re-use is possible with regular seals; two seals should be employed and both should be double-crimped.

Rhyne and Ed Sorger, Washington state safety supervisor, agreed that strapping is desirable from the safety standpoint, because there is no wear and tear on the materials binding the logs.

A SHORT PEP TALK to logging crews first thing in the morning develops interest and a good attitude toward safety, reported Bob Cunningham, logging superintendent, Rayonier, Inc., Sappho, Wash. He also stressed the value of good radio communications in saving lives and reducing severity of accidents. Rhyne cited the advantage of a small crew in changing shows, where personal communication kept everyone alert.

Ed Sorger praised industry for its cooperation in reducing accidents during the last several years "over and above normal expectations." He explained that Oregon's logging accident insurance is supported by lower rates because of a basic difference in state law. Oregon, he said, provides for other industries to help bear the heavier costs of logging insurance due to the fact that it is a basic industry, also that it is conducted in rugged terrain.

LOG BUNDLING & SAFETY panel, from left: A. A. RHYNE, Rhyne Log. Co.; NORTON SMALLWOOD, Charles H. Rasmussen & Co.; C. J. HOPKINS, Peninsula Ply. Corp.; DICK JACOBS, Signode Steel Strapping Co.; BOB CUNNINGHAM, Rayonier, Inc., ED SORGER, Washington Safety Super.

New Officers and Directors 1956-57

(All towns listed are in Washington).

CHAIRMAN: Reid Priest, Priest Logging & Equipment Co., Port Angeles.

VICE CHAIRMAN: Dave Kurtz, Aloha Lumber Co., Aloha.

SECRETARY-TREASURER: Wally Fontaine, Crown Zellerbach Corp., Port Angeles.

SERGEANT-AT-ARMS: Robert Rheinberger, Pope & Talbot, Inc., Port Gamble.

BOARD: J. G. Rucker, Simpson Logging Co., Shelton; Charles Kirkwood, National Logging Co., Forks; C. J. Hopkins, Peninsula Plywood Corp., Port Angeles; Carroll Mercer, Buck Mountain Logging Co., Shelton; Petrus Pearson, Fibreboard Products, Inc., Port Angeles; Evert Carlson, Rayonier, Inc., Port Angeles; and A. H. Haley, Pope & Talbot, Inc., Port Gamble, immediate past chairman.

ONE OF THE MOST optimistic appraisals of the lumber industry was given by Hillman Lueddemann, vice president, Pope & Talbot, Inc., Portland, Ore. He answered the question, "Will the Chemical Tail Wag the Big Lumber Dog?", by pointing out the great number of new plants based on utilizing mill leftovers and low-grade logs.

The prominent executive, one-time president of West Coast Lumbermen's Association, also said that wood composition boards, due to their strength and durability, will make inroads in the plywood market. Pointing out the Western Kraft Co. pulp plant at Albany, Ore., as an example, Lueddemann stated that the small pulp mill is now within financial reach of the lumber industry. (Western Kraft runs entirely on sawmill chips, uses no whole logs.)

The following reasons were cited by Lueddemann as bases for predicting that "the big lumber dog" will have its tail swung for him by other products:

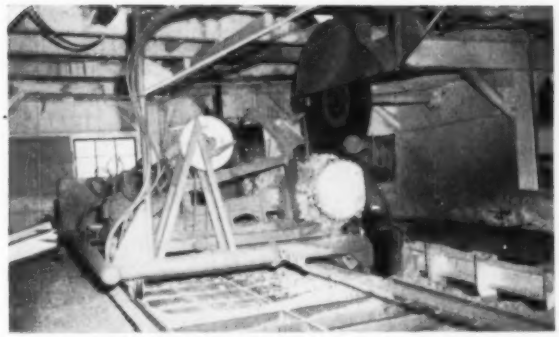
- Raw material in the form of leftovers is cheap.
- Profits are greater than in lumber alone.
- Ability of wood to be taken apart and put back together as a desirable new product.

WHAT'S NEW IN logging machinery was discussed by a panel of loggers and machinery men, with audience participation. Al Bruschke, Totem Equipment Co., Seattle, reported that

(Continued on page 133)

SCALE MODEL OF Porta-Tower, portable steel logging spar tree, demonstratetd by HUGH HANNA (left). Inventor is REID PRIEST (right). Actual tower is 93 feet high and weighs 38,000 lbs. Many Porta-Towers are in operation on west coast.

NEW EQUIPMENT PANEL, from left: FERNINAND SCHMITZ, Berger Engineering; HUGH HANNA, Priest Log. & Eqpt.; AL BRUSCHKE, Totem Eqpt.; ELMER CRITCHFIELD, contract logger; O. A. TIMBERLAKE, Collins Machinery; REID PRIEST, Priest Log. & Eqpt.



CHENEY CALIFORNIA LUMBER Co., Greenville, Calif., converts stud-length log to 4-in. cants at double circular headrig with two 60-in. saws. Note power-driven off-bearing roll to right of saw.

DOUBLE EDGER built by I. W. Johnson Engineering Corp. converts 4-in. cant to 2x4's. Near edger side, for 1-in. and 2-in. cants, has saws set 4-in. apart. Operator controls from far right.

Stud Mill Modernizes Plant

California mill converts its facilities from a three to a single headrig unit

THE STUD MILL OF Cheney California Co. at Greenville, Calif. has been converted from a 3-headrig production unit to a single headrig mill. Extensive modernization has been effected throughout front end of the mill and the back end of the mill has also been rebuilt.

Logs enter the mill via log haul, are converted to stud length as they reach upper end of this transport unit by an electric powered chain saw positioned by an electrically controlled air-operated Hanna cylinder. Air-operated kickers eject the cut-to-length log from log slip onto a live-chain deck. These kickers were specially designed and built for this application and remove the log without rolling it. One man, working at a control center at top of log haul, carries out all functions taking place between the pond and the point where control of log is taken over by head sawyer.

Carriage, deck equipment, feedworks and double-circular headrig with two 60 in. saws were all specially developed for this particular operation—and most of the units built at the plant. Deck facilities include air-operated log stop-and-loader, pusher arms for "slapping" log into position on carriage and a set of pump chains for turning the log on the carriage.

The sawyer—only operator between log haul and edger—controls all functions of carriage and deck from his operating position. The carriage, equipped with electric-air combination friction feedworks powered by 75 hp. motor, has electrically controlled air actuated setworks and air dogs. This headrig, heavily built of 24 in. I-beams, is powered by two electric motors—250 hp. on bottom saw and 150 hp. on top saw.

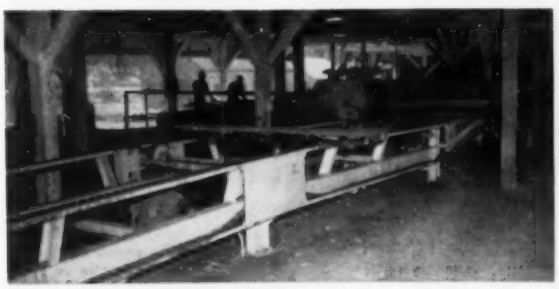
LOGS ARE BROKEN down at headrig into 1, 2 and 4-inch wane-edge cants. Most of the volume is produced as 4 in. cants and only very little as 1-inch.

An automatic off-bearing roll behind the headsaws, and nearly in line with them, operates in conjunction with a wide rubber conveyor belt. As a cant is severed from the log it engages the automatic off-bearing roll which shifts it onto the live belt. The belt discharges cants onto two power rolls (rather widely separated to facilitate drop-out of shorts) which deliver to a metal belt transfer (Diamond Chain Co.) discharging stock to chain transfer leading to the edger.

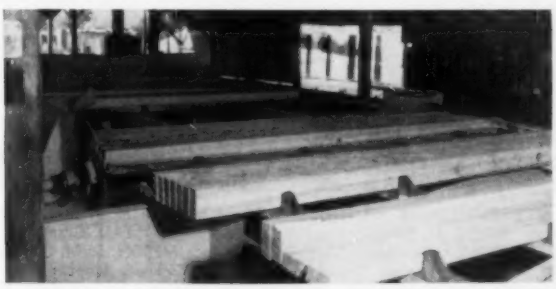
Entire output of the mill goes through a double edger, built special for this job by I. W. Johnson Engineering Co., Tacoma, Wash., which has 22 in. saws on a 6 in. arbor powered by 150 hp. motor. One side of the edger has 18 saws spaced 2 in. apart for making 2x4s from the 4 in. cants. Saws on the other side of this double machine set 4 in. apart for making 2x4s from 2-in. cants and 1x4s from the occasional 1-in. cant.

The edger processes entire output of this 75-80M shift mill. The edgerman's operating position is at one end of infeed side where he has air-electric controls of all edger and edger-chain functions. He doesn't physically contact the stock. Double buckling action of the reversible edger spotting chains enable the operator to place a cant at any desired position on the feed table.

Differential pressure control systems, used extensively here, have an



CANTS RIDING ON the Rex 78 chain transfer to the edger. I. W. Johnson edger has 22-in. saws on a 6-in. arbor, 150 hp. motor.



CHENEY CALIFORNIA built this double-end trimmer which automatically cuts the studs emerging from edger to 8 ft. lengths.

WANE-EDGE CANT from headrig on Diamond belt goes to Rex chains to the edger.

CONVERTING LOGS to 8 ft. 1½-in. lengths at upper end of log haul with electric saw.

LOCALLY DESIGNED air-electric feedworks with 75 hp. motor gives mobility to carriage.

important role in this plant's operations.

STUDS EMERGING FROM the edger pass over a set of wide-spaced rolls (for dropping shorts) to transfer leading to a company-built 2-saw automatic 8 ft. trimmer. A line-up bar at one side of the transfer automatically positions each piece longitudinally as stock is carried to and through the trimmer by chains.

Two compressors—a 160 cfpm. Ingersoll-Rand and 105 cfpm. Davey—provide air for use throughout the plant.

The mill's refuse system was designed to automatically collect by-product material from every production point and deliver to a 65-ft. C&D refuse burner. A main troughed conveyor extends from the trimmer, under edger and transfers to burner conveyor. Two side conveyors feed to this main unit—one from deck-saw side of deck and the other from headrig and its side of the deck.

B. C.'s Interior Mills Produce Record Volumes

• One of the revolutionary developments in British Columbia's lumber industry has been the upsurge of production in the interior of the province, where mills last year accounted for more than 2 billion board feet out of a total for all districts of 4.8 billion feet. This compares with a production of 1.7 billion feet in 1954.

More and more mills are being established in the interior country and the production curve has been steadily rising for several years, as the coastal sawmill industry becomes increasingly integrated with pulp and paper and plywood manufacture.

An important segment of this productive area is represented by the Interior Lumber Manufacturers Association, which recently held its annual meeting at Penticton. A year of unsurpassed activity was reported by H. A. McDiarmid, retiring president.

McDiarmid said that the major challenge facing the association during the past year was preparation of a brief to be submitted to the Sloan Forestry Commission. Appreciation was expressed for the work of Bob Walkey, George Minns, Barney Johnson and MacGordon and a committee comprising Messrs. Eriksson, Brown, Munsie and Moss.

A comprehensive survey of the industry was made last year to determine the labor and wage categories recognized in various operations.

Work of the grading committee under the chairmanship of V.C. Brown was reported on, and the release of W. F. C. Clark from theP.L.I.B. to conduct a re-inspection service in Eastern Canada and the U.S. was commended as a fine example of co-operation between producer, marketing agencies and the inspection bureau. Importance of up-grading the product was emphasized.

New president of the association is Gus Eriksson, Knight Lumber Co., Crowsnest, and vice president is Vern Vance, Kootenay Forest Products, Nelson. The new executive committee is composed of G. McMynn, Boundary Sawmills, Midway; V. C. Brown, Cranbrook Sash & Door, Cranbrook; Dennis W. Brooks, Celgar, Ltd.; Castlegar; W. Jostad, Cranbrook Cartage & Haulage Co., Cranbrook; B. Nevil Smith, Creston Sawmills, Creston; James White, East Kootenay Lumber Co., Fernie; Jack Munsie, Kettle Valley Lumber Co., Princeton; Henry C. Nelson, Galloway Lumber Co., Galloway; F. Kirkland, Lumby Sawmills; A.P. Lloyd, Federated Co-operatives, Canoe; Harvey McDiarmid, Timber Sales, Ltd., and Lumby Planing Mills, Lumby.

INTERIOR LUMBER MANUFACTURERS Association of British Columbia Directors. Standing, from left: B. N. SMITH, Creston Sawmills; W. JOSTAD, Cranbrook Cartage & Haulage Co.; F. W. KIRKLAND, Lumby Timber Co.; H. B. SIMPSON, S. M. Simpson, Ltd.; JAMES WHITE, East Kootenay Lumber Co.; H. C. NELSON, Galloway Lumber Co.; G. McMYNN, Boundary Sawmills. Seated, from left: H. P. LLOYD, Federated Co-operatives; HARVEY A. McDIARMID, Timber Sales, Ltd.; GUS ERIKSSON, Knight Lumber Co., new president of the Association; V. VANCE, Kootenay Forest Products and DENNIS W. BROOKS, Celgar Development Co.

GUS ERIKSSON (right) new Association president, manager of Knight Lumber Co. at Crowsnest, B. C., discusses problems of the rapidly growing lumber industry in interior British Columbia with H. A. McDIARMID, Timber Sales, Ltd., Ericksson's predecessor as president of the Interior Mfgrs. Assoc.

New Lightweight

ESCO BARDON HOOKS

ARE 40 PER CENT LIGHTER

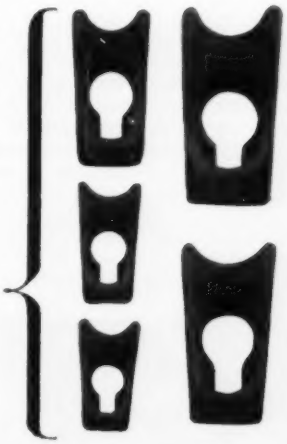
Regular Light weight hook weighs only lbs. For wire rope sizes ½", ⅝", ¾".

Light Size Light weight hook weighs only ½ lbs. For wire rope sizes ⅞", 1".

MAKES CHOKER SETTING EASIER, FASTER

Cut rigging time with the new, lightweight *ESCO* Bardon Hooks. These new lightweight hooks incorporate all the famous features of the regular *ESCO* Bardon Hook. Large rope sleeve bearing area, greater than other lightweight hooks, increases rope life. Ferrule pocket is also larger, making it easier to insert ferrule. Although 40 per cent lighter, hooks are stronger than the wire rope itself.

Whether you need light or regular weight choker hooks, always insist on *genuine ESCO Bardon* hooks for easier installation, faster rigging, increased safety and longer life.



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- **Wedge Type Choker Sockets and Eye Sockets.**
- **Arch Hook and Eye Guard Shackles.**
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- **Skidding Pans and Pan Hitches.**
- **Mainline Rigging.**
- **"Link Lock"® Butt Chains.**
- **Nelson "Screwy"® Butt Chains.**
- **Bardon® Butt Chains.**
- **Butt Swivels and Spreader Chain.**
- **"R" Type Screw Pin Shackles.**
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- **Binder Chain.**
- **Crotch Line Assemblies.**
- **Open and Closed Sockets.**
- **Sling Hooks.**
- **Hitch Shackles (S. D. Type, Chain and Hoist)**

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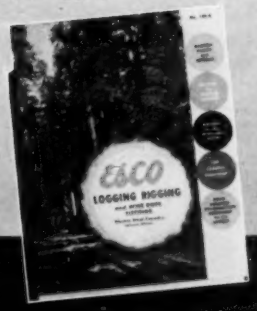


Write for name and address of your nearest ESCO dealer.

PROGRAM PARTICIPANTS, from left: ARNO SCHNIEWIND and Dr. ARTHUR B. ANDERSON, University of California, Berkeley; H. D. STILWELL, Oregon Forest Products Laboratory, Corvallis; F. W. GUERNSEY, Forest Products Laboratories of Canada, Vancouver, British Columbia; Dr. F. A. COCKRELL; EDWIN KNIGHT, Western Pine Association, Portland, Oregon.

CENTRAL CALIFORNIA Dry Kiln Club was host. From left: HARVEY SMITH, sec.-treas. and program chairman; JAMES JACOBSEN, president; FABIAN REAM, second vice-pres.

Control Devices Described

Western Dry Kiln Clubs stress lumber moisture control at annual session.

"THERE WILL BE A PREMIUM on stable lumber in the future, properly manufactured and properly dried to the desired final moisture content," predicted "Keynoter" Dr. George M. Jemison, California Forest & Range Experiment Station, U. S. Forest Service, to 150 delegates attending the eighth annual session of Western Dry Kiln Clubs. The meeting, held in Berkeley, Calif., on May 3 and 4, stressed the theme "Moisture Content of Lumber."

Two officers of the Central California Dry Kiln Club officiated on program details. The program was introduced by president James Jacobsen, Ralph L. Smith Lbr. Co., Anderson, Calif. and outlined by secretary-treasurer Harvey Smith, California Forest & Range Experiment Station.

Jemison pointed out that timber size for sawmills is decreasing and less desirable species are being used. These factors call for greater attention to manufacture and efficient and skillful processing of lumber.

At the University of California Forest Products Laboratory, 10 research sections are being activated, each dealing with a specific area, reported Dr. Fred Dickinson, director. These include timber physics, in which studies relating to the physicial properties of wood will be carried out, and chemical processing, which will investigate chemical processes applicable to the removal of moisture from wood.

He said that three internal fan cross-circulation type dry kilns have been purchased. Two of these hold 500 b.f. each. The third kiln will have a capacity of about 6 M board feet, and will be housed in a separate kiln building to be erected shortly. Kilns are designed to make possible study of certain variables, such as rate of air flow, high temperatures and steam consumption. Another piece of equipment to be erected soon will permit studies of the use of both vapors and solvents in the drying of wood. There are also four controlled temperature-humidity rooms permitting the equalizing of the moisture content of wood at any one of the number of moisture contents.

SPECIFIC PROBLEMS TO be investigated are:

- Development and improvement of drying schedules for native hardwoods.
- Drying properties of second growth and secondary confierous species.
- Moisture content determination methods.
- Various solvents and vapor seasoning methods.
- Economics of air drying, kiln drying, and solvent and vapor drying.
- Study of factors causing degrade of lumber during the drying operation.

Dr. Dickinson said that research problems of general interest to the industry will be investigated using State funds, but that the laboratory will be in a position to conduct sponsored research for private industry.

Groups were taken on inspection tours of the facilities of the University of California Forest Products Laboratory.

Commercial manufactured moisture control and detection devices were explained by the following equipment representatives:

- John Barret, Moore Dry Kiln Co., Portland, Ore.
- Harry Brooks, Foxboro Instrument Co., San Leandro, Calif.
- John E. Hefferline, Laucks Laboratories, Inc., Seattle.
- William J. Delmhorst, Delmhorst Instrument Co., Boonton, N. J.
- John R. Barnes, Moisture Register Co., Alhambra, Calif.

PRINCIPAL CHARACTERISTICS of the units are highlighted:

Moore-Bauer Moisture Control

Developed by Leo Bauer, superintendent, Alexander-Stewart Lbr. Co.,

PROGRAM PARTICIPANTS, from left: L. H. WOOD, Hult Lbr. Co., Junction City, Ore.; THOMAS WINTRINGHAM, Castell Industries, Inc., Ukiah; PAT STEBBINS, Stebbins Mill & Lbr. Co., San Leandro; LES HARTER, Woodwork Institute of California, Fresno; ROBERT INGLIS, Associated Molding Co., Los Angeles; HEBER RADCLIFFE, McCloud River Lbr. Co., McCloud.

DR. FRED DICKINSON (Left), University of California Forest Products Lab, spoke on research. Right, Dr. GEORGE JEMISON, Calif. Forest & Range Expt. Station, "Keynoter".

New "booster power"

on C Tournapull-Arch for steep grades!

New Electric-Rear-Wheel-Assist gives this 260 hp logging tool plenty of power to climb grades...up to 50%. This gradability combined with speeds to 25 mph at last gives you the long-range skidder you've been looking for.

Design and operation of the 4-wheel drive Electric-Assist is simple. Mounted just ahead of each Arch wheel is a standard LeTourneau-Westinghouse A.C. electric motor. Power is transmitted from the electric motor through a planetary gear-drive to rear-wheel sprocket by chain-drive, then through an air-actuated clutch to a simple planetary gear-drive within each Arch wheel.

The system is equipped with dual controls. When the dashboard switch is in the "on" position, the entire Assist system is automatic.

When Tournapull is put in low-gear, high-range, interlocking system engages, Arch-wheel-clutch.

With dashboard switch in "off" position, Electric-Drive-Assist is disengaged and does not operate until actuated by the operator for extra pulling power in low-gear, high-range. The Assist cannot be actuated for service except when Tournapull is in low-gear, high-range operation, where added power is needed.

Entire system is made up of job-proven components to assure long, dependable, and trouble-free service.

New C Tournapull-Arch with new Electric-Assist also offers these additional basic advantages:

Winch-on-Arch — Winch is mounted on Arch, where it belongs. You have direct line-pull to winch regardless of location or angle of prime-mover.

All-weather differential — When one front-drive wheel begins to slip, differential automatically transfers up to 4 times the traction effort to wheel on firmer footing.

Powerful brakes and electrotarder — Disc-type air brakes on all 4 wheels, 3763 sq. in. braking area, provide safe control. Electrotarders, provide additional braking at the flip of a switch.

Positive power steer — Steering is independent of power-train or line-pull. Electric motor swings prime-mover at touch of switch. Steering does not affect traction power on drive wheels.

Finger-tip electric control — Winch operates by push-button on dashboard. High torque electric motor responds instantly in any weather or conditions.

Interchangeable trailing units — New Arch can be interchanged with Scraper, Rear-Dump, Side-Dump, lift-and-carry Crane or Flatbed Hauler. Each additional trailing unit costs only about ¼ as much as original Tournapull prime-mover and logging Arch.

To learn more about this new, high-speed, grade-climbing, more powerful C Tournapull-Arch, see your LeTourneau-Westinghouse Distributor today.

New C Tournapull-Arch can turn 90° in any footing. Big fenders on Arch wheels prevent logs from damaging tires.

Tournapull—Trademark Reg.U.S. Pat. Off. A-928-G-b

LeTourneau-WESTINGHOUSE Company

Peoria, Illinois

A Subsidiary of Westinghouse Air Brake Company

Prineville, Ore., and manufactured by Moore Dry Kiln Co.

The devices consists of two parts — the instrument proper, a calibrated megometer, and a push-button unit. Only one instrument is necessary for each initial installation. It is hung on the wall of the instrument room, and plugged in to any 100 volt a. c. outlet. There are no batteries, and only one tube. The second part of the device consists of a set of push buttons and is plugged into the side of the instrument proper, and sits beside it on the wall.

Each pair of banana plugs at the bottom of the push button device are wired to a pair of electrodes at each kiln load. These leads run from the banana plugs on the push button unit through a conduit to an outlet box which is located at about the center of each kiln load and attached to electrodes located approxiately 8 feet apart on representative sample boards. One set of push buttons is required for each track. The same push button case can be used for any number of loads on any one track.

Advantages of this device:

- The kiln does not have to be shut down, the steam turned off, and the kiln cooled, while the operator goes in and takes core samples.
- It gives, in a few minutes, a moisture content reading for a sample board in each crib, and an average button reading for several or all the sample boards.

Foxboro Model 40 Proportional Controller

This has new and fine adjustments incorporated which any operator can make without interrupting the process. There is more room in the case which has decided advantages from a service and operator's standpoint.

Brooks told the group that the lumber industry had lagged far behind other industries in demanding improved equipment. He said that the instrument manufacturers had developed improved instruments for other industries but not for dry kiln work. He foresaw the monitoring of temperatures in dry kilns, and an automatic, continuous checking of temperatures.

Laucks Sentry System

The basic components of a Sentry system for lumber consists of an electronic control unit or console, (2) the market controller, (3) the sensing element or electrode, (4) and the automatic markers, the latter being arranged to designate any board which falls below one given moisture level or exceeds another — thus giving a "three-way" sort.

Advantages to a kiln operator:

- Wet lumber can be marked and excluded *before* it is surfaced, rather than after, and can be salvaged through re-drying or diversion to other use.
- Over-drying, often practised as a safeguard against the above, is eliminated.
- A constant and complete record of seasoning can be kept by the kiln superintendent.
- Failures in drying equipment can be spotted instantly.

MOISTURE CONTROL DEVICES were explained by (from left): LEIF ESPENAS; JOHN R. BARNES, Moisture Register Co., Alhambra, Calif.; JOHN HEFFERLINE, Laucks Laboratories, Inc., Seattle, Wash.; HARRY BROOKS, Foxboro Instrument Co., San Leandro, Calif.; JOHN BARRETT, Moore Dry Kiln, Portland, Ore.; WILLIAM DELMHORST, Delmhorst Inst., Boonton, N.J.

- The two level marking system affords a segregation of lumber into three categories. Boards are marked with a green dye if they fall below, say, 7 percent or with a red dye if they exceed, say, 12 percent and pin-pointing of dryer schedules is promptly assured.

Delmhorst Moisture Meter

Through the use of this system the kiln operator does not have to shut down drying operations, wait for the kiln to cool, and then go in and cut samples for checking moisture content. It thus saves heat, and time, and allows continuous checking of samples of lumber being dryed in the kiln.

A Delmhorst moisture meter is hooked up to a station selector, and both of these instruments are hung in the kiln instrument room. The station selector is a switch device from which wires run to electrodes — stainless steel nails, in sample boards in the kiln charge. To read the moisture content of any one of the 11 samples under control, the operator turns the switch to the appropriate station number and reads the moisture meter.

Moisture Register Company

General chacteristics of the radio frequency type moisture meters are:

- Portability — it can be carried from station to station easily.
- Rugged construction — designed for field use as well as laboratory.
- Fast operation — can make average tests within a few seconds time.
- Easy and convenient operation — non-technical personnel can use instruments with confidence.
- Does not mar sample under test.
- Not important testing rough lumber but very important testing surfaced boards and veneer.
- Calibrated for common species.

RF TYPE METERS are now being manufactured for testing lumber up 4 in. thick, by testing both sides and averaging results, and for testing thin lumber and veneer.

The RF meter is being used in the plywood industry on the finished panel and to help determine when the glue is dry enough. An RF meter is also made to test stacks of veneer, and on wood waste materials.

TWO FACTORS THAT WILL influence EMC (equilibrium moisture content) are temperature and relative humidity, and that practically these are assumed to be the only factors. However, there are other factors which which can influence EMC, said Arno P. Schniewind, University of California, Forest Products Laboratory. One of these is that wood has a great deal of inherent variation. Another factor is the species of wood.

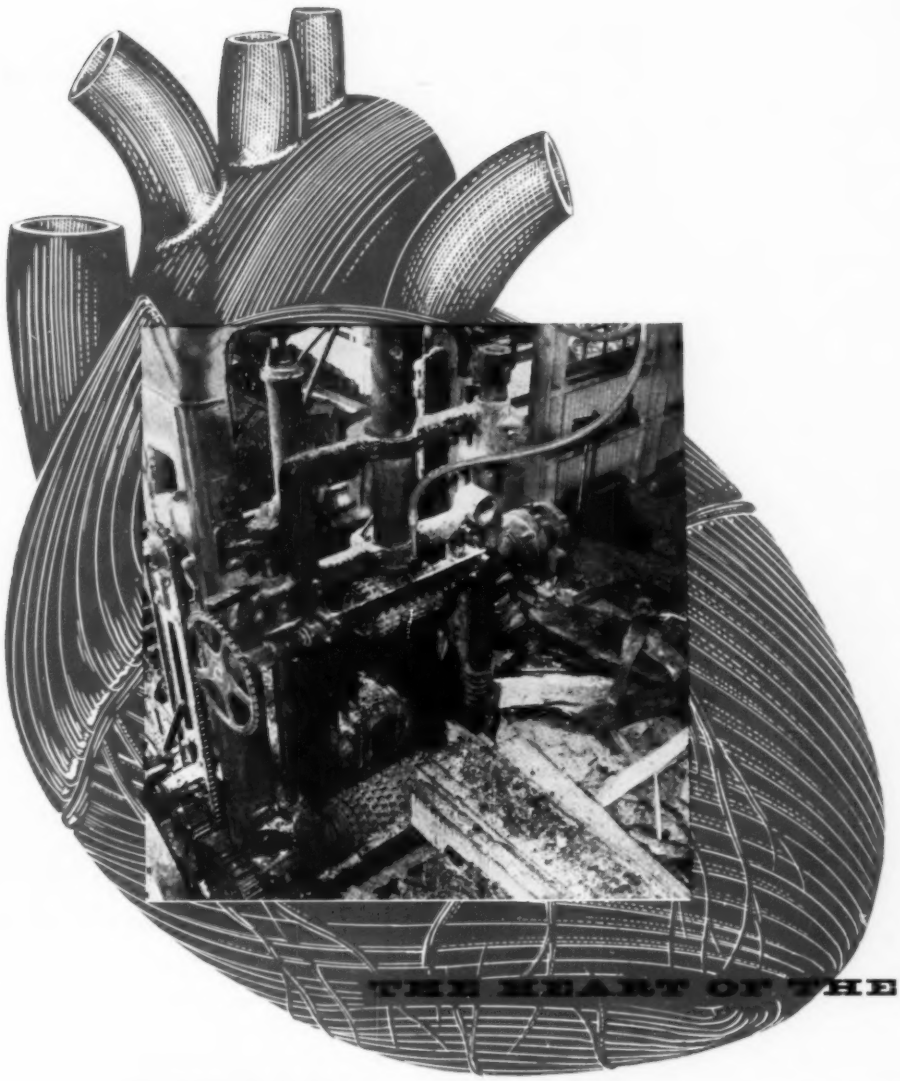
Schniewind described a study he made on aspen in which he found the sensitivity of that study was not sufficient to establish the exact influence of thickness of wood samples on sorption hysteresis (a retardation).

"The hysteresis constant, usually referred to as the hysteresis ratio, is the ration of adsorption to desorption moisture content at a given relative humidity. This ratio is practically a constant over most of the range of relative humidity conditions and becomes unity at zero and 100 per cent relative humidity, respectively."

EXPERIMENTS WITH HIGH temperature drying were outlined by F. W. Guernsey, Vancouver, B. C. Laboratory, Forest Products Laboratories of Canada, a Division of the Forestry Branch, Dept. of Northern Affairs and National Resources.

(Continued on page 90)

PANEL OF REDWOOD Seasoning Committee, from left: L. W. LANE, The Pacific Lbr. Co., Scotia; A. F. PETERSON, Hammond Lbr. Co., Samoa; W. E. PRATT, California Redwood Association, San Francisco and H. E. MENKENS, JR., Arcata Redwood Co.



THE HEART OF THE MILL!

Van Vleet mill foreman
Dave Rice

That's the way Dave Rice, mill foreman at Van Vleet Lumber Products, Inc., Arcata, Calif., describes the Swedish gang saw which turns out some 65,000 board feet of lumber per eight-hour shift.

Guide blocks in the Swedish gang must withstand great pressure, heat and shock loads as the saw cuts huge logs into as many as 12 cants. "For the past seven years we've relied on General Petroleum's Viscolite Oil Extra Heavy to protect our gang saw...we know what it can do, and we just can't afford down-time," says Rice.

Like so many other leading lumber mills, you'll find it pays to do business with G.P. Top-rated products and the lube engineering know-how that goes with them—they're yours when you deal with General Petroleum. Prove it for yourself...call your nearest G.P. office today.

SOCONY MOBIL

GENERAL PETROLEUM CORPORATION

2-1049

Control Devices Described

(Continued from page 88)

A mixture of steam and air is the process used by the Vancouver and Ottawa laboratories. It resembles the conventional type of drying in that both wet and dry bulbs are used for control and different degrees of saturation are possible.

In drying eight charges of 1 inch Western hemlock it was found that 240° was the best temperature, with a circulation rate of 1100 feet per min., and the lumber dried in 12 hours.

The advantages of high temperature drying as cited by the speaker are: speed, and saving of space, since these units will probably occupy only a third of the space required for a conventional kiln.

Edwin Knight, Western Pine Assoc., Portland, Ore., claimed "Water and high temperature work together to shorten kiln life. Several possibilities have been considered in the effort to keep water out of kiln walls and ceilings."

These include ventilated roofs and roof coatings, that selectively passes the vapor from the roof but repels the entry of free water from above.

A STUDY MADE DURING seasoning and machining of lumber from Douglas fir, western larch, and white fir at Halfway, Ore., in 1955 was described by H. D. Stillwell, Oregon Forest Products Laboratories.

The test lumber was dried about a week in hot, dry weather. Some checking occurred during the week. The lumber was dried in a Moore two-track, cross circulation kiln. Final moisture content ranged between 10 and 12 percent for most items.

Among the three species, Douglas fir lost most value in dollars per M fbm in all grades except No. 1. For all species, the select grades lost most value per M fbm. One inch thick boards of Douglas fir and white fir lost more value per M fbm than did 2 inch thick boards of the same species. Important degrade factors were: planer splits and checks in select grades; knotholes in 4/4 common grades; and mechanical blemishes in larch and Douglas fir select grades.

Special drying processes were discussed by Dr. Arthur B. Anderson, in charge of wood chemistry, University of California, Forest Products Laboratory.

He reviewed vacuum drying, infrared radiation, high frequency heating, chemical seasoning, boiling in oil, vapor drying, and solvent seasoning. Dr. Anderson pointed out that for one reason or another all these methods, except possibly solvent seasoning were impractical for lumber drying. He said that the latter process seemed to work well on tan oak, and that method might be of use in seasoning western hardwoods. This method also worked well on Douglas fir battery separators, Dr. Anderson said.

LES HARTER, TECHNICAL consultant, Woodwork Institute of California, Fresno, said that in 1936, 18 percent of every structure in the state was architectural woodwork, and that in 1955 this had dropped to 2.3 percent. He attributed the drop to uninformed architects. Steel, aluminum and plastics have made deep inroads on the use of wood.

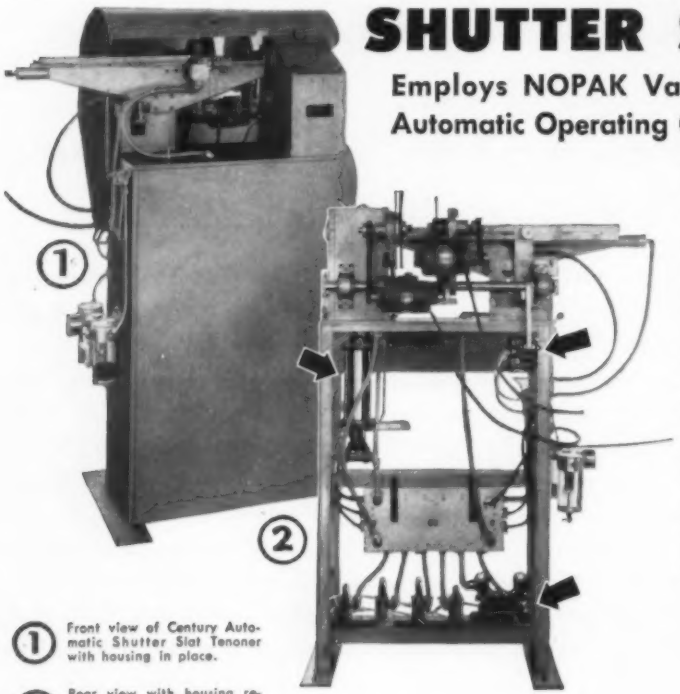
He made a plea to the dry kiln club men to assemble data regarding the best moisture content of lumber for various sections of the state, and forward it to his group. Harter assists architects with their problems and he said that the architectural profession needs information regarding wood.

Needed is more instruction in the use and application of wood, especially as regards the area in the State where it is to be used, said Robert Inglis, Associated Molding Co., Los Angeles, Calif. He recommended a study of EMC for various areas in the State, and educating architects to specify the right moisture content for the lumber in the area in which it is to be used. He also said there should

(Continued on page 92)

SHUTTER SLAT TENONER

Employs NOPAK Valves and Cylinders to Implement Automatic Operating Cycle



This completely automatic machine, built by Century Tool and Engineering Co., Culver City, Cal., turns out 1200 tenoned wood shutter slats per hour, *automatically*. It cuts dowel-like projections on both ends of each slat and cuts the individual pieces to length. The machine continues to re-cycle automatically until the complete length of stock is cut into tenoned shutter slats.

The cutter head is moved into position by a 2" x 2" Model E NOPAK Cylinder. The stock is rotated 360°, during the cutting operation, by a NOPAK 2½"x6" cylinder, controlled by a NOPAK Model V250-R Slide Valve.

This is but one example of how NOPAK Valves and Cylinders are used in automated operating cycles in many types of machinery and equipment.

① Front view of Century Automatic Shutter Slat Tenoner with housing in place.

② Rear view with housing removed, shows 2 NOPAK Model E Cylinders and NOPAK Model V250-R Slide Valve.

NOPAK
VALVES AND CYLINDERS
DESIGNED for AIR and HYDRAULIC SERVICE

PACIFIC COAST REPRESENTATIVES:
CALDWELL MACHINERY CO., 58 S.W. Oak St., Portland, Oregon • E. C. GRIFFIN CO., 5241½ First Ave., South, Seattle 4, Wash. • WESTERN MACHINERY CO., Spokane 11, Washington • GALBRAITH & SULLEY LTD., 1331 West 6th Ave., Vancouver, B.C.—Canada • CAL-ORE MACHINERY CO., Medford, Oregon • MILLER MACHINERY CO., Missoula, Montana • JAMESON SUPPLY CO., Lewiston, Montana

GALLAND-HENNING NOPAK DIVISION
2779 SOUTH 31ST STREET • MILWAUKEE 46, WISCONSIN

Logging contractors in Washington timber forests supply the Cascade sawmills according to radio schedules. Remote log camp crews use G-E 2-way radio to keep abreast of mill production needs, handle emergencies, and to coordinate operations.

RADIO ties sawmills to logging camps

Cascade Lumber Co., Yakima, Wash., relies on G-E 2-way radio to coordinate work of 5 logging contractors, maintain sawmill log inventories.

Five Pacific-Northwest logging companies direct their logging trucks to sawmills by G-E 2-way radio. The loggers, under contract to Cascade Lumber Co., feed timber to the various mills according to production requirements. The result: loggers keep abreast of mill output—sawmills handle a steady flow of lumber.

Two base stations originate Cascade's radio signals to supervisory vehicles and contractors' equipment. With radio, Cascade has instant contact with contract loggers operating within a 100-mile radius of the headquarters sawmills.

Radio is vitally important to the lumber industry. It serves as a fire warning system, helps speed needed parts to remote crews. Two-way radio aids traffic control over narrow trails, is ready for any emergency.

The new Progress Line of 2-way radio equipment offers G.E.'s exclusive Plug-In Chassis. All chassis are interchangeable. The new Progress Line transmitter, receiver, and power supply may be switched between sets *. . . instantly.*

2-WAY MOBILE RADIO

See your G-E Communications Counselor for the complete details or, write: *General Electric Co., Communication Equipment, Section X2366, Electronics Park, Syracuse, N. Y.*

Progress Is Our Most Important Product

GENERAL ELECTRIC

Control Devices Described

(Continued from page 90)

be more education in the handling of lumber after it leaves the manufacturer.

A PANEL OF MEN from the Redwood Seasoning Committee discussed quality control of moisture content in lumber drying. Members were L. W. Lane, The Pacific Lbr. Co., Scotia; H. E. Menkens, Jr., Arcata Redwood Co.; A. F. Peterson, Hammond Lbr. Co., Samoa; and W. E. Pratt, California Redwood Assoc., San Francisco, chairman of the panel.

Panel conclusions:

- There is a tremendous variation of moisture in redwood lumber as it comes from the mill.
- Pile spacing is the biggest factor in air drying. At Scotia, Pacific Lbr. Co. gets more uniform air drying by having stacks face east and west.
- Efficiency and uniformity of air yard seasoning involves consideration of the following factors: width of lumber packages; height of piles; sticker thickness; orientation of piles in relation to the prevailing winds; and spacing between piles.
- The Schewart control chart is the most valuable tool in the quality control method of analysis. When applied to seasoning, it is essentially a map showing the progress and the direction of the quality of drying. It provides information on the average moisture content; the basic variation in moisture content; and the consistency of performance.
- Quality control in kiln drying is a method of improving quality, reducing costs, and improving producer-customer relations.

DESCRIBING THE PERCENT check of moisture content in dry lumber used at Collins Pine Co., Chester, Calif., Joe Grist said that in the summer of 1953 the company had an excessive amount of roller split in white fir and sugar pine, both in common, shop, and better grades. After a number of tests conducted by Edwin Knight, Western Pine Association, it was determined that the cause was over-drying. Slower schedules with longer final equalizing periods will dry the lumber to a uniform final moisture content without over-drying much of the lumber in the charge. However, the slower drying schedules result in higher costs and lower kiln output.

Production can be increased and the danger of over-drying reduced if a fast kiln schedule can be used to dry the lumber to a point where there is a minimum of over-drying then sort on the dry chain to pull the heavy boards, which can be expected.

In 1953 Collins Pine Co. installed a Laucks Sentry system for metering all lumber passing over the dry chain. The number of pieces of lumber that fall within the desired moisture content range is recorded. The number of pieces of lumber that are over-dried and the number of pieces that are wet are also recorded. This record quickly shows up poor kiln operation or faulty kiln equipment. A crib-by-crib record pin-points the very spot in the kiln where the trouble begins. These tickets are picked up and the moisture content recapped. One recapped report stays at the kilns and the other two reports are sent to the office on each crib of lumber that goes over the dry sorter.

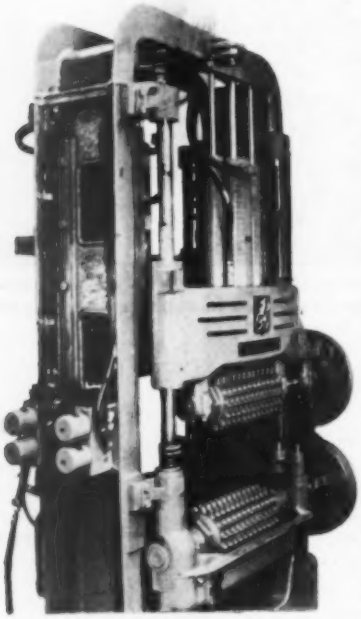
It costs money to ship water in wood from Ukiah, Calif. to eastern points, stated Thomas Wintringham, Harold E. Castell Industries, Inc., Ukiah, Calif. A study made showed that if lumber at a moisture content of 3 percent above the specified dryness is shipped consistently, the shipping cost of just the water on one-third this cut (10 million b. f. Douglas fir, surfaced) will amount to $6,893.14 is shipped to New Orleans; $7,084.25 to Chicago; and $7,440.11 if shipped to New York. The mill cuts about 30 million feet per year.

A MOISTURE METER of the resistance type was described by Pat Stebbins, Stebbins Mill & Lbr. Co., San

(Continued on page 148)

Soderhamn Dixie Gang Saw

First in Efficiency, Economy Dependability and Durability



Outstanding Features:

High production capacity.

All cast steel side frames.

Exclusive design connecting rods and bearings.

Water cooled guides.

Patentable chain stretcher for drive of feed rolls.

Swing out bottom-top feed rolls for easy change of saws.

Movement of feed rolls, electrically controlled.

DC Gear Motor with AC-DC Generator set controls feed speed of the gang direct from the Soderhamn carriage.

In sizes from 18" to 34", built to U. S. standards.

Spare parts available.

SODERHAMN'S Complete Line Also Includes:

New Cambio fully automatic Barker; Soderhamn D-3 low cost Barker; HF-60 and HF-30 Slab Chippers; Soderhamn Chip Screens CS-90C or CS-35; and other efficient machines for forest industries. Direct factory service and engineering. Performance guaranteed. For further information, write—

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SODERHAMN, SWEDEN SINCE 1864 TALLADEGA, ALABAMA

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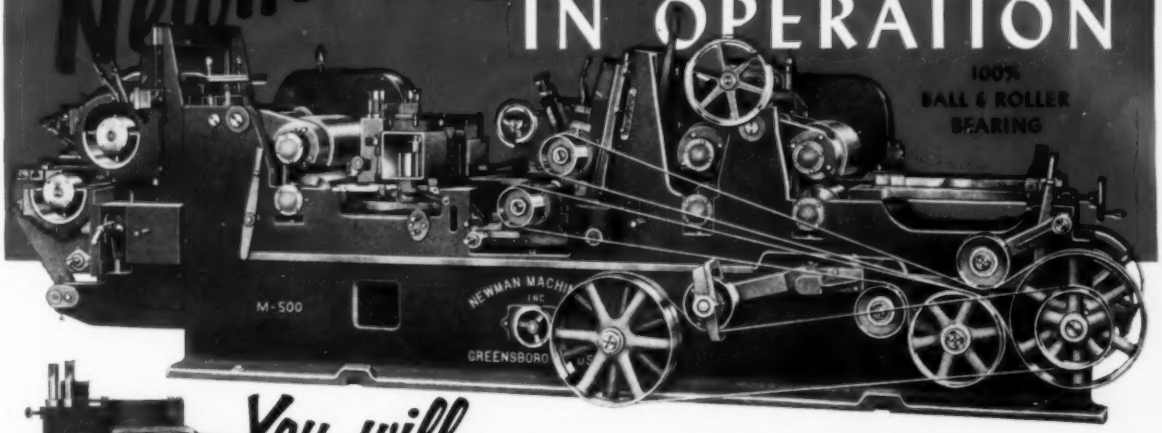
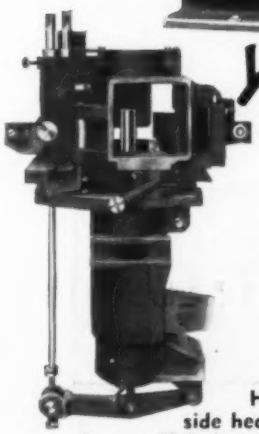
1017 Newman 500 PLANERS & MATCHERS IN OPERATION





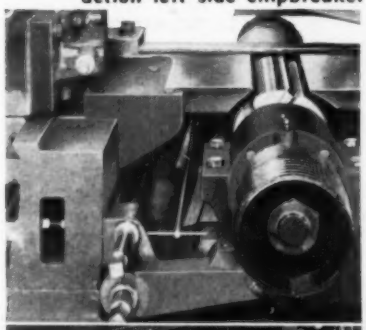
You will want the new M-500 with these FEATURES

- All Sprockets steel—heat treated
- Flame hardened bottom bed plates and pressure bar
- Feed works reversible
- Wear resistant rigid solid steel long guide
- Chatterproof jointer units
- Simultaneous roll raising device for front bottom feed rolls available
- Quick release for left side head available
- Roller knife setting gauge available

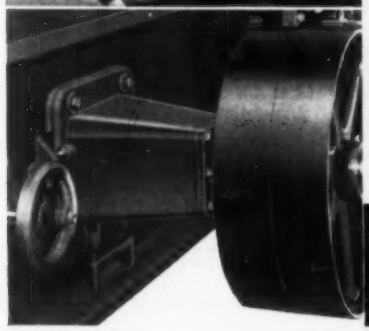
Feeds to 200 F.P.M.

Delivery from Stock If You Hurry

Heavy duty side head units of long quill design with double action left side chipbreaker



Massive vibration free bed plate after bottom cylinder



Hand wheel for adjusting bottom cylinder, also sturdy support for feed shaft.

Newman Machine Co., Inc.

GREENSBORO, NORTH CAROLINA, U. S. A.

120,000 bd. ft. per day!

(CUTTING DOUGLAS FIR DIMENSION)

Compare this outstanding one shift cutting record to that of any other single machine! While this figure represents one of the highest total cuts achieved in one day, this Mill Engineering SUPER log gang averages 105,000 bd. ft. per day for a Northwest mill

Mill Engineering 36" SUPER

WITH AUTOMATIC OVERHANG

High Speed Capabilities

Production records come naturally to Mill Engineering's 36" SUPER log gang because it combines all the best design elements known to gangsaw engineers. The adjustable overhang of the saws, providing upstroke clearance, is the only method which permits continuous high speed operation (up to 300 R.P.M.s) with a minimum of vibration and strain. Add this to the long stroke of the SUPER and you have an unbeatable combination that will pay off with record-breaking production when you need it.

Rugged Construction

The SUPER is often called upon to maintain continuous, full capacity production – and does – with a built-in safety factor at every point of strain. Super-tough Meehanite frames and base, patented steel alloy sash and heavy-duty pressure-lubricated guides, are just a few of the exclusive design features that give the SUPER that added margin of safety.

Ease of Operation

Perhaps the greatest advancement in gangsaw operation has been Mill Engineering's development of the electrically controlled automatic overhang, which eliminates *all* log sorting and periodic resetting of the sash overhang. Mill Engineering's air operated infeed carriage handles the logs smoothly and efficiently with very little effort by the operator. Air operated controls, centrally located, give quick positive feed roll adjustment. These and other job-tested features get the SUPER under way fast and eliminate time loss between logs.

Compare the facts—*and* the figures. Increased production *plus* the accuracy and efficiency of gang sawing (30% to 50% overrun) point the way to increased profits. When you're planning for increased production—get extra capacity *and* dependability in one package. Make sure it's by Mill Engineering—*America's pioneer manufacturer of gangsaws—exclusively.*

MILL ENGINEERING & SUPPLY CO.

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SEATTLE 4, WASHINGTON
Phone: SE 1034-1035

SALES REPRESENTATIVES **— *California:* IDACO ENGINEERING CO., 3200 Peralta Street, Oakland 8, California; *Oregon:* CROWN MACHINERY & SUPPLY CO., 1805 N.W. Thurman, Portland 9, Oregon; *South and East:* WILCO MACHINE WORKS, 1301 North Hollywood Street, Memphis 8, Tennessee**

LOVENESS LUMBER CO., Canby, Calif., has Klamath Iron Works fade-away loader taking finished lumber packages at planing mill.

BREAKDOWN END OF Klamath Iron Works semi-automatic sticker-stacker handles most of cut of Loveness' Canby and Malin mills.

Pivot Arm Carriers Are Used

Stacker for stickers, plus smooth yard handling, speeds up lumber processing

GERLINGER PF-10 carrier delivers rough green packaged lumber to stacker infeed rolls.

THE CANBY, CALIFORNIA SAWMILL of Loveness Lumber Company, purchased from the Ralph L. Smith Lumber Co., operates on 2-shift schedule to average 140,000 board feet of lumber daily. White fir makes up slightly over half this amount. The remainder consists chiefly of ponderosa pine augmented by a goodly amount of incense cedar. This later species appears to be relatively free from defect in the area tributary to the Canby mill.

Not only do the three double-track Moore kilns, acquired as a part of the plant and modernized for more effective operation, dry practically all lumber produced at this sawmill but also the output of Loveness Lumber Co.'s mill at Malin, Ore. The entire cut of this Southern Oregon mill is hauled by trucks and trailers 53 miles to the Canby plant for kiln drying, finishing and marketing. This northern unit principally cuts conderosa pine.

To facilitate handling the output of both mills at Canby the system for transporting packaged lumber about the plant was modernized. The company purchased two of the new "pivot arm" type Gerlinger lumber carriers and two Gerlinger lift trucks—all large capacity units. This equipment practically eliminates the use of carrier blocks about the plant. One of the two carriers, with monorail-crane type pivot lifts in place of longitudinal shoes, handles transport of rough green lumber packages ahead of kilns from both mills. The other carrier of same type provides packaged dry lumber for the planing mill, takes away from the dry sorter, removes part of the finished lumber packages from planing mill and transports lumber to and from dry sheds and carloading areas.

Two smaller Ross carriers are used at this plant—on rail loading dock and at dry sorter.

One of the two Gerlinger lift trucks works about the dry sheds and the other generally in the yard stacking and unstacking packaged lumber and loading trucks.

TO FACILITATE PROCESSING the cut of both sawmills, a Klamath Iron Works lumber sticker-stacker was installed ahead of the dry kilns. Now all green lumber goes over this machine which converts the boards from package to stickered kiln car units. The addition of this unit balances the handling set-up, as an unstacker (also Klamath Iron) was installed before present owners took the plant over. Stickers are hand placed at stacker operation and removed by hand at the unstacker.

The planing mill has undergone

(Continued on page 136)

ONE OF TWO Gerlinger lift trucks unloads packaged green lumber coming from Malin by Kenworth truck, with 300 hp. Cummins.

KLAMATH IRON WORKS stacker moves a course of lumber into the hand-placed stickers for kiln drying at Loveness' Canby plant.

Now Leschen Offers

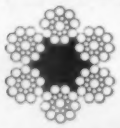
NEW WIRE ROPE Service-Score SYSTEM

Simple plan tests wire rope performance and costs—shows comparative values—helps reduce operating expenses—speeds reordering.

Leschen's quick-fact-finding Service-Score System utilizes easily applied, easily removed pressure sensitive stickers, which record equipment and rope data, dates of rope installation and removal.

What is your *true* wire rope cost? Do you know? Are you using the right rope type or construction? The right brand?

Questions like these are readily answered with Leschen's new Wire Rope Service-Score System.



Service-Score stickers report performance—type versus type, brand versus brand. Performance facts reveal costs and help *cut costs*.

Service-Score stickers provide easily-available, *helpful reordering data*—equipment identification, wire rope diameter, length, construction, date installed, and date removed.

Service-Score stickers remind operators when it's time to replace rope—*increasing safety* margins.

Service-Score records enable you to check and compare wire rope types and constructions. For example, you find for yourself, as others have, that Red-Strand consistently scores high. You learn the advantages of super-strength Porter Imperial Red-Strand, or Hercules Flattened Strand.

Write for sample stickers. Or see your nearby Leschen Wire Rope distributor.

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WIRE ROPE

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H. K. PORTER COMPANY, INC.
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Hardboard, Particleboard & Flakeboard Department

• Donlad Linville, Executive Secretary of Hardboard Association, Chicago, displays "before" and "after" kitchen models prepared by his organization to show what can be done in the home with hardboard. This example of "Operation Home Improvement" uses hardboard as floor underlayment, perforated hinged and sliding doors, counter tops, perforated utensil hanger, soffit, and panel at each side of window. Plans call for showing these models at home shows and over TV all over the country.

Association Is Planned For Particleboard Group

• Particleboard producers are carrying on a concerted movement to establish standards for their product. Several meetings have been held in the Lake States, one held at Portland, Ore. in May, and others are planned.

National Lumber Manufacturers Assoc. called a session in Chicago, attended by 24 representatives of 19 interested organizations, which gave the movement concerted action. There Leo V. Bodine, executive vice president of NLMA, pointed out to the group that "matters of common concern merit consideration for group treatment early in the development of the industry". He also stressed the need for product identification.

As a result of this meeting a committee composed of manufacturing representatives was formed to study needs of the industry and to make recommendations concerning establishing a particleboard organization. The committee membership includes: Chairman B. F. Swain, Jr., National Veneer and Lumber Co., Seymour, Ind.; L. A. Patronsky, The Wabash Screen Door Co., Minneapolis, Minn.; E. H. Lane, Sr., The Lane Co., Alta Vista, Va.; and A. E. Rose, Tree Farm Products Co., Spokane, Wash.

According to R. C. Cranch, of Timber Engineering Co., Washington, D. C., funtional secretary of the group, the committee is currently surveying scope of the industry.

• **BROWNSVILLE PARTICLE BOARD** & Associated Products, Inc., Brownsville, Ore., has nearly completed construction of its main plant building and machinery deliveries are to start in mid-July. A company spokesman says particleboard production is scheduled to start about next Jan. 1st.

BOWATERS SOUTHERN PAPER Corp.'s new fibreboard mill will be built on this site adjacent to Bowaters' present newsprint operation at Calhoun, Tennessee. Hardwoods will be stored in a unique 489-foot diameter underwater storage pond, at center of the photo.

New Fibreboard Plant Scheduled for the South

• Work began recently on the new 120 million square feet a year hardwood fibreboard mill being built at Calhoun, Tenn., by the Bowaters Southern Paper Corp.

The mill, which will employ about 150 persons with an annual payroll of a million dollars, is expected to be in operation sometime early in 1957. It will be built north of the newprint mill's log pond storage area, adjacent to the present mill site.

Capacity of the proposed plant will be about 360,000 square feet a day. Based on 335 operating days this will amount to some 120 million square feet of board a year or about 45,000 tons.

The new mill will utilize Bowater's ample supply of hardwoods—red oak, white oak, maple, yellow poplar, gumwood and hickory. A hardwood storage area will be provided in the present underwater pond storage area which will hold from four to six weeks supply of wood for both the fibreboard mill and a proposed hardwood pulp mill.

Surveys have shown that in the local area alone, about 878 million square feet of fibreboard a year is used. It has been estimated, according to a Bowaters spokesman, that consumption of this product will treble during the next 20 years. Consumption has increased steadily for the past 10 years.

It has been recommended that the new plant be designed to produce both ½-inch standard insulating board and ⅛-inch S2S (smooth two sides) hardboard. Provision was also made in the engineering estimate for the eventual production of oil tempered fibreboard.

Personnel and equipment has not yet been selected. Bowaters officials, however, described the process and equipment to be used as follows:

Hardwood will be drum-barked, chipped and stored in conventional fashion. After chipping, wood will pass through a uniformater to reduce chips to size of matchsticks. Then they will be cooked in digesters, washed in a washing press and refined in two stages. After refining they will be stored again. From storage, chips will go to mixing conveyor where resin size will be added, into a machine chest for addition of alum, and pumped to consistency regulator and volume control to the headbox of forming machine.

A double-cylinder pressure type forming machine will be used. Four pairs of press rolls will be used at wet end of machine and a direct gas-fired dryer will also be employed. For hardboard production, boards will pass automatically through a high frequency heater, then trimmed and automatically collected in an elevator and fed to a steam-heated press, 4 x 16 feet with 16 daylight openings, making smooth two-sided board. Extractors will remove board and it will be stored after humidifying.

• **THE CELOTEX CORP. HAS ANNOUNCED** that it will build a $6.1 million fiber-board plant on the 176-acre site of a former Ford sawmill at L'Anse, Mich. It is scheduled for completion within two years and will boost the company's fiberboard capacity by 20 percent. The expansion program also included the construction of a $6 million gypsum board plant and new plaster mill near Fort Dodge, Iowa. The company has completed arrangements to buy 242,000 acres of timberlands in Michigan's upper peninsula from the Ford Motor Co. for $6,-850,000.

PROGRAM PARTICIPANTS, from L.: P. S. QUELCH, Simonds Canada Saw, Vancouver, B.C., W. N. PAULEY, Consulting Engineer, Spokane, Wash., R. W. WELLWOOD, Univ. of B. C., Vancouver; S. M. BATORI, Controls & Comm., Eugene; W. MORSS, Weyerhaeuser Tbr., Tacoma.

ON PROGRAM, from L.: R. M. SAMUELS, Ore. Forest Lab., Corvallis; R. QUICK, Weyerhaeuser, Tacoma; H. MACLEAN, B. C. Lab.

FPRS Discusses Automation & Lumber Upgrading

NEW TRENDS IN SAWMILLING and pulping received consideration at the spring meeting of the Forest Products Research Society, Pacific Northwest Section, held at Eugene, Oregon, on May 7-8. Field trips were combined with the technical discussions. Included were the plants of Weyerhaeuser Timber Co. and the Booth-Kelly Lumber Co. at Springfield. Chairman J. R. Stillinger, Cascades Plywood Corp., Lebanon, Ore., presided. Dr. R. W. Wellwood, vice-chairman, University of British Columbia, Vancouver, B. C., was program chairman for the sessions.

Select the right saw for the job, emphasized P. S. Quelch, Simonds Canada Saw Co., Vancouver, B. C. For **inserted tooth** saws the most important information needed is the feed in inches per revolution of the saw. It takes one eighth inch of feed (8 teeth per revolution) to cut one inch of lumber. (This doesn't apply to swedges and spring set teeth.)

Too many teeth for the job mean more power consumption, more sharpening work, more shank replacements and more labor in maintenance. Not enough teeth mean too much chip load and lugging the power unit.

On **band saws,** Quelch gave the rule of thumb: 1/1000 inch of gauge thickness for each one inch of wheel diameter. Know what each tooth is cutting. Heavy 11 and 12 gauge saws, with 3 inch of space, have an eighth inch bite per tooth; mill resaws (14 guage), and 2 inch of space have one tenth inch of bite; planer resaws (18 gauge, with 1¾ inch space, have one twentieth inch bite per tooth.

On saws used for smooth trimming lumber ends 200 teeth are needed to cut an inch of lumber. Get the right bites for the saw, one tooth at a time, said Quelch.

There's a limit to saw thinness, too. Thin saws must have more support. What is needed is a band saw with the two wheels almost together. There is no limit on rim speed for circular saws, as the saw, unless defective, doesn't fly apart at the rim. Pressure guides are better than hanging guides on band mills. There's no limit on gullet capacity, because no size can carry all the sawdust produced.

AUTOMATION IN SAWMILLING was reviewed by Stephen M. Batori, Controls and Communication Co., Eugene, Ore. He defined it as "control of mechanization." Automation provides maximum utilization of manpower, accuracy, absence of fatigue or mental disturbance, elimination of mistakes and safety. Replacement of manpower is **not** the primary function of automation.

Batori stated that very little has been done to automate milling processes, most of the changes having been made only in the last 2 or 3 years. Big reason: non-uniform raw material.

Examples of where automation can be applied in a sawmill: riderless carriages, presetting setworks for resaws; presetting, remote control shifters for edgers; stackers and unstackers; knot boring and plugging machines; lumber end and edge gluing machines.

Automation is accomplished by arranging existing standard production machines in product lines and linking them with automatic transfer devices, or by building special purpose equipment, summarized Batori.

A REVIEW OF UPGRADING of lumber products by Weyerhaeuser Timber Co. was given by Willard Morss, WTCo., Tacoma, Wash. He stated that his firm has discontinued many of its patching processes, initiated during the war. Knot plugging has run into some troubles, and experimentation is still underway. Edge and end gluing has been found profitable for handling "distress" lumber items. The Springfield plant has some end gluing machines on order for this year. Potlatch Forests Inc., Lewiston, Idaho, is using a knot-sealing device successfully.

Morss stated that the Douglis fir region still has a long way to go in getting maximum grade recovery from logs. Many mills are obsolete, based on present-day utilization standards. Gang saws are often misused on wrong size stock.

The Temple-Bovay Measurmatic Sorter was described with slides by W. N. Pauley, Construction Engineer, Spokane, Wash. Lumber is fed into slots, travels on edge. The system was first custom-engineered for the Southern Pine Lbr. Co. at Diboll, Texas, and is now used by three southern mills, including Kirby Lbr. Corp., Silsbee, Texas (July 1955, THE LUMBERMAN.) The system at Kirby handles 51 separations, with 2 units used. Southern Pine has 27 separations. Cost per sorting bay is about $12 to $15 thousand, with roofed facilities. The Kirby installation saved 30 men. However, the Measurmatic sorter will not meet the requirements of all mills; a study is necessary. It is best for a large volume of small boards.

THE PULPING SESSION considered expanding use of wood residues, by R. M. Samuels, Oregon Forest Products Laboratory, Corvallis; neutral sulfite pulping of western red alder, by Robert Quick, Pulp Div., Weyerhaeuser Timber Co., Tacoma, Wash.; variation in extractive content in western red cedar heartwood by H. MacLean, Forest Products Laboratory of Canada, Vancouver, B. C.

Samuels stated that in 1955 some 863,000 tons of mill residues were chipped for pulping. A tonnage of 1 million is predicted for 1956, including hardboard and softboard.

A combined meeting of the Inland Empire and Columbia River Sections of FPRS will be held at Lewiston, Idaho on Sept. 24-25.

Death Takes Alfred Loeb

• Alfred A. Loeb, founder of the Alfred A. Loeb Company, Portland, Ore., exporter of fancy wood obtained from burls, died at his home in Portland in May. Mr. Loeb was born September 28, 1879, in Springfield, Ill., and moved to Portland with his family when he was 11 years old. Approximately 30 years ago he founded the Alfred A. Loeb Co.

Mr. Loeb was for many years a member of the recreational committee of the Portland Chamber of Commerce and a past president of the Old Oregon Trail. In 1948 a park area of Myrtlewood trees near Brookings, Ore., was named in his honor by the state.

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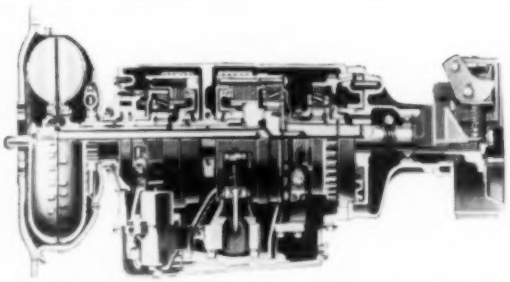
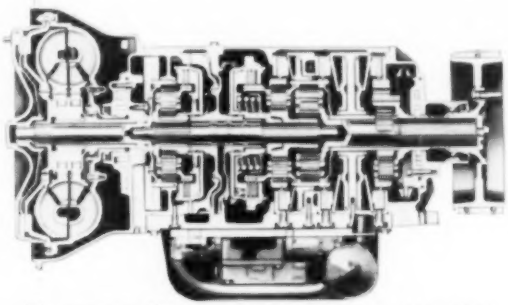
Famous Chevrolet *Hydra-Matic*, or all-new *Powermatic*, provides easy, safe automatic driving that's tailored for your truck!



Hydra-Matic —optional in Series 3000 and 4000 models at extra cost—brings new ease to tough jobs, cuts hauling time and maintenance expense.



Powermatic —optional in Series 5000-10000 models at extra cost—assures the easiest, safest big-truck operation ever known! It's a Chevrolet "first."

Pick *any* Chevrolet truck . . . and you'll find there's a modern automatic transmission to make your hauling easier, safer, and more profitable!

If your choice is a Series 3000 or 4000 model, there's ***Hydra-Matic.*** This modern automatic transmission not only gives you the ease of no-shift hauling . . . it also *saves you maintenance money* because the hydraulic coupling protects drive-line parts from shock loads. Or, if your job calls for a 5000 through 10000 Series Chevy, there's exclusive ***Powermatic*** —the first automatic transmission designed especially for big trucks! Six fully automatic forward speeds and a torque converter virtually eliminate manual gear shifting on hills or in traffic! A revolutionary "retarder" assures safer down-hill hauling, less brake wear and you make better time through traffic because all shifts are "power-on" shifts!

Now *automatic driving*, available throughout the Chevrolet truck line, gives you one more reason to see your Chevy dealer soon! . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

Chevrolet truck manual transmissions are great performers, too!

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**Optional at extra cost in 5000-6000 through 8000 Series models, standard in 9000-10000 Series models.*

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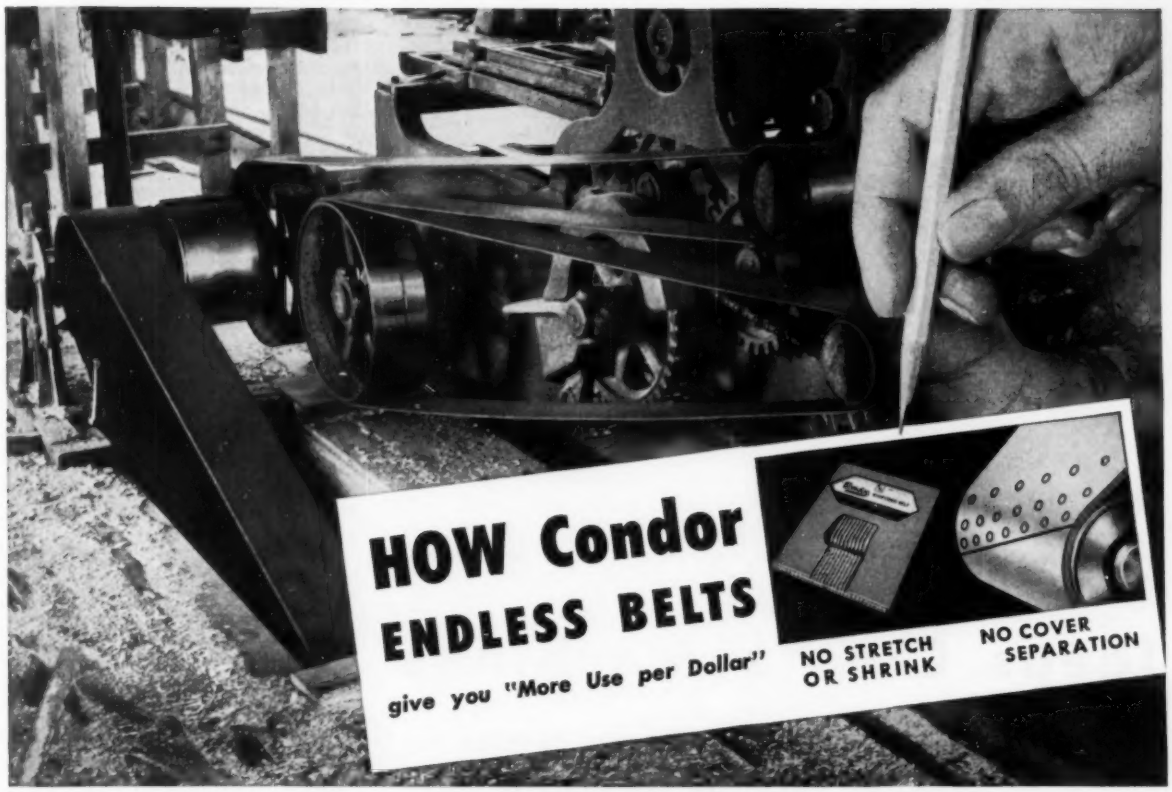

Condor Whipcord Endless Belts Boost Production

Steady, unfailing power delivery with high overload capacity, long life, and freedom from stretch or shrinkage result in greater efficiency at lower cost for machines equipped with Condor Whipcord Endless Belts. These all-purpose belts offer exceptional advantages for hard wearing installations—on drives with short centers, small take-up, small pulleys, reverse bends, high speeds and heavy loads at high tensions. Extremely flexible, they are ideal belts for machines where serpentine drives supply power for several operations. Condor Whipcord Belts feature an endless-wound, sealed-in cord construction which is de-stretched during manufacture. They will not shrink on the drive and are virtually unaffected by atmospheric changes. On many drives they have outlasted 3 to 10 ordinary belts.

EXTENSIBLE-TIP COVER SPLICE

R/M's exclusive Extensible-Tip cover-end splice "elasticizes" the splice area with a series of rubber rivets to dissipate stress when rounding pulleys. This eliminates cover separation . . . adds further to the longer service life of Condor Whipcord Belts.

CONDOR COMPENSATED BELT

On closed drives where belt fasteners are required, Condor Compensated Belt eliminates fastener trouble. A patented Manhattan process equalizes belt ply stresses when rounding pulleys. *Every* ply is under uniform tension and *every* ply pulls its full share of the load to eliminate ply rupture and separation—especially at the fasteners. Condor Compensated Belt holds fasteners up to 4 times longer than ordinary belt!

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Both Condor Whipcord Endless Belts and Condor Compensated Belt are available in a selection of four driving surfaces to meet various machine tension requirements. Let an R/M representative show you how to boost production . . . get "More Use per Dollar" . . . with Condor Endless Belts and Condor Compensated Belt at your mill.

RM 8054L

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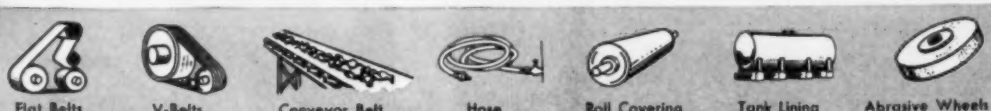

Other R/M products include: Industrial Rubber • Fan Belts • Radiator Hose • Brake Linings • Brake Blocks • Clutch Facings
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CANADIAN FOREST PRODUCTS, Harrison Mills, B. C. Here two Pacific trucks are loaded with spar tree. Truck in foreground has Torque-Matic brake, supplied by General Motors.

Ideas Create Machines

Job-adapted units are devised by British Columbia logging operation

USUALLY WHEN A LOGGING road is constructed it is the answer to a most pressing problem — quick and economical access to more timber— but to Lorne Johnson, superintendent of Canadian Forest Products, Harrison Mills logging division, the successful completion of each new mile of roadway serves to add emphasis to another problem which has yet to be completely solved.

Canadian Forest Products' Harrison Mills operation is near Vancouver, B. C., and is divided into camps. One consists of company-owned family dwellings on the shore of Lake Harrison, and the operational camp is nearly 20 miles to the north.

The main camp, which consists of bunkhouses, field office, mess hall, machine shop, etc., is now a considerable distance from the closest side, which lies beyond the camp. As each new road stretches the distance between camp and set, it is more difficult to get men to and from the woods inside reasonable limits of time.

The company has considered two or three alternative moves, but two of them involve considerable expenditure, with other disadvantages.

The first idea was to move the entire camp to a new and more central location. The second was to set up a mobile camp system. The prohibitive cost of the first and the lack of suitable location have at least temporarily shelved the move. The second, although more feasible than the first, involves several hazards, the most of important of which is fire. Company officials do not like to leave men deep in the woods for any prolonged period. Added to this, the problem of supply maintenance and other factors has ruled out this possibility.

THE COMPANY HAS TURNED to a third idea which is to speed up the method of transporting men to and from the woods. The long-familiar crummies will be replaced with lightweight faster panel trucks, converted and equipped with seats to accommodate 12 to 15 men. Each truck will carry its own first-aid equipment. A recent test showed that considerable time could be saved by using panel trucks. (This idea is not new in the Harrison Lake district, for at least one other camp has replaced their crummies with converted panels.)

The ever-lengthening roads are also having an effect on the number of trips a logging truck can make to the dump. The dump is located near the townsite camp on Harrison Lake. Trucks have a considerable distance to travel. The terrain is steep. The only possible solution has been the addition of new trucks.

The company now operates a fleet of 12. Latest acquisitions include a Pacific supplied through Pacific Truck & Trailer Co. of Vancouver, equipped with an Allison Torque-Matic brake unit. The Torque-Matic permits greater breaking power on the steep grades. While it does not materially help in speeding up a trip, it will be instrumental in keeping the truck on the job longer through a minimum of trips to the shop for brake service.

Operating six sides, with five active and the sixth held as a spare, should any of the other be forced to close down for any reason, all woods operations are geared for peak efficiency, with the company turning to mechanical help wherever possible in an effort to keep production at a high level.

For example, camp mechanics came up with an easily mobile line horse. A six-wheel drive gravel truck was converted to a flat deck to accom-

CONVERTED GRAVEL TRUCK with line horse mounted on rear platform. Six-wheel drive provides power for Tyee Mach. line horse.

ALLIS-CHALMERS HD-20 tractor at work on road building at Canadian Forest Prod.'s Harrison Mills camp, north of Vancouver, B.C.

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A-480M DIAGONAL PLANER and MATCHER

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TORN GRAIN

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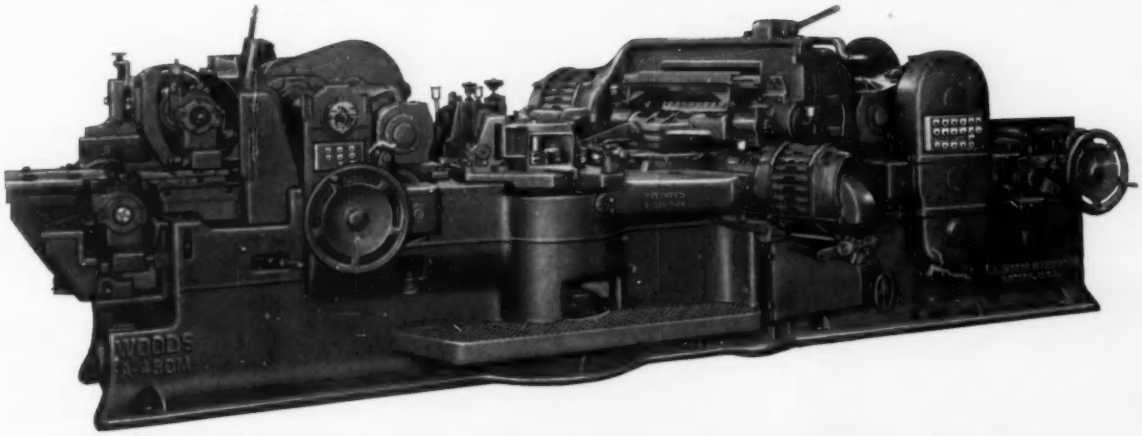
Upgrading of all stock, with astonishing improvement in finish on the lower grades now made possible with the revolutionary DIAGONAL PLANER and MATCHER.

Investigate now how this improved patented method of sizing lumber can improve your margin of profit on every hour's run. Write today for the A-480-M booklet.



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Export Dept.: United States Machinery Co., 90 Broad St., New York City

CRUMMIES' LAST DAYS. Familiar cars at Canadian Forest Prod. camp will soon be replaced with smaller, faster converted trucks.

A FEW OF THE twelve trucks which operate at CFP camp. Included in the fleet are five Pacifics, four Macks and three Hayes.

modate a Tyee line horse. This unit permits lines to be quickly rolled and easily transported as opposed to the previous method of dragging lines. A tractor unit will replace the conventional wooden skids. To be pulled by truck or tractor, the tractor tread skid will have its own power for loading.

IN THE MACHINE shop, replacing the familiar tree skids with tractor treads. The unit will be drawn by truck or tractor, but will have its own power for loading. ▶

TO KEEP THE SPRAWLING operation under complete control, telephone lines have been strung to key points, with Marconi two-way radio providing the link to off-the-road spots. A phone call from Vancouver can be taken by the superintendent deep in the woods. Notified via the radio in his truck, he is able within minutes to get to the nearest telephone box and complete the call.

Apart from conventional yarding, loading and road building equipment which includes an HD-20 Allis-Chalmers tractor, the company also maintains two fire trucks and ambulance unit.

Canadian Forest Products is one of British Columbia's largest timber holders and wood processing organizations. In addition to its forests on the mainland, it owns one of the biggest single blocks of timber in the province in the Nimpkish valley, Vancouver Island, where Russell Mills is general superintendent. The company operates at Eburne Sawmills Division and Huntting-Merritt Division, two of the largest sawmills and shingle mills in the Vancouver area, and at New Westminster its Pacific Veneer Division is the largest plywood plant under one roof in British Columbia and the only manufacturer of hardboard.

John G. Prentice is president of the company. L. L. G. Bentley is first vice-president and William McMahan is second vice-president. Maurice Edwards is manager of the Harrison Mills operation at Vancouver head office in the Bentall Building.

At the camp, key personnel includes W. Davis, woods foreman; A. Johnson, roads foreman; Joe Chester, warehouse; E. Salmon, falling and bucking supervisor.

Normal operations in the camp call for 180 men with a reduced crew in the winter months, but the smaller crew in the winter provides no respite for Lorne Johnson. He is busy planning new roads—then figuring out how to get men to and from the new sets in a reasonable space of time.

News From the South . . .

• Georgia, Texas and Alabama are now in the top four states in the nation supporting the private woodlands managament of the American Tree Farm System. Georgia moved into number one spot, pushing total acres to 3,734,284. In 1955, the state added 1,105,539 acres. Texas was second with a total of 3,370,099 acres, Oregon was third (total: 3,426,792 acres) and Alabama pulled into fourth spot with a total of 2,307,217 acres.

• Charles Soule, vice president and general manager of the Escambia Treating Co., and president of Timber Suppliers, Inc., was recently named chairman of the Greater Pensecola community Chest.

• Hayes Smith succeeds the late John S. Bates as wood procurement chief of the Southland Paper Mills, Inc., at Lufkin, Texas. Mr. Bates died in December.

• Ben Davis, Jr., has been appointed assistant executive secretary of the Mississippi Forestry Association.

• A young Douglas, Ga., fire spotter for the Georgia Forestry Department made headlines all over the south recently when he jumped from a burning plane without a parachute and suffered minor bruises and scratches.

L. H. "Pete" Barnwell, took off in his small two-passenger plane to check a reported fire northeast of Broxton, Ga. A few moments after taking off, he radioed to the airport that the plane was on fire. Forester Ronald Drury rushed to the airport with a water truck.

At 30 feet with the flames licking at his hands and at the loaded gas tank, Pete decided it wasn't safe to hang around any longer. He dropped off the wing. Barnwell's most serious injury: a few bruises — — — and a muddy suit.

SAM KUHAR tries out a new Model 73 McCulloch chain saw. Looking on are FRED KUHAR and HUGO SANDSTROM, of CFP.

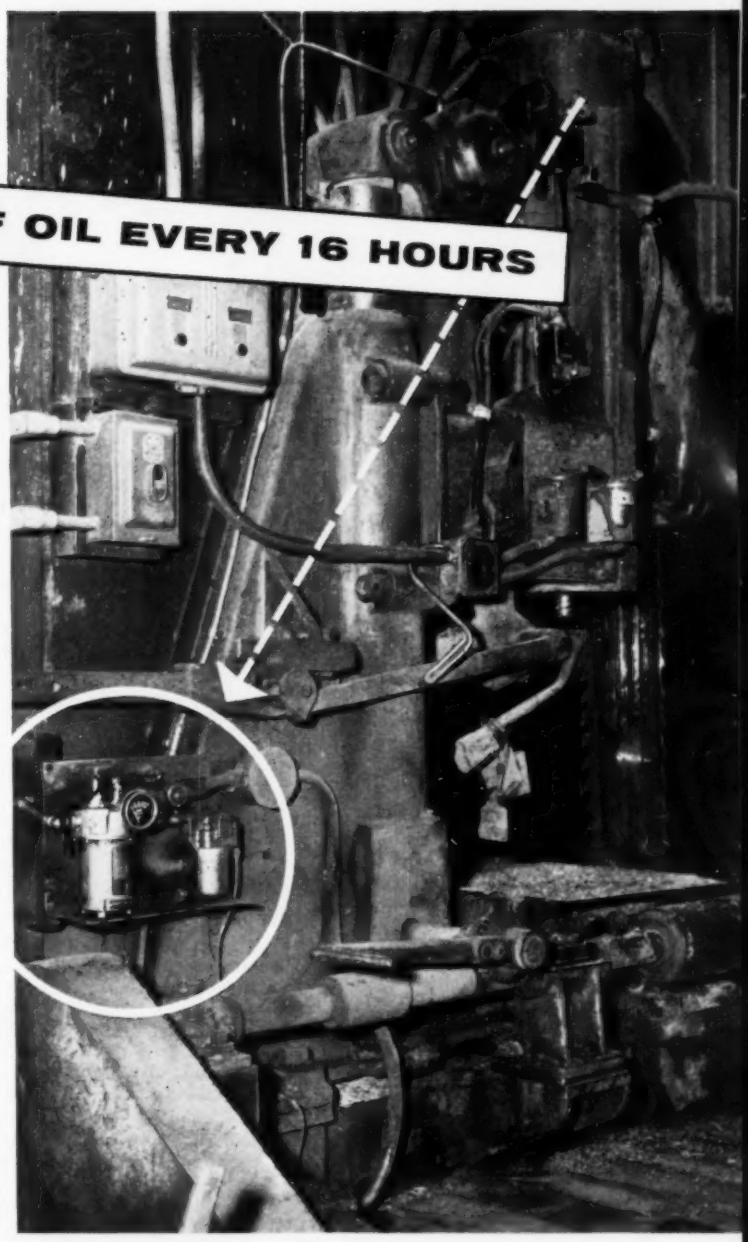
LOGGING SUPERINTENDENT L. E. JOHNSON and foreman W. Davis of Canadian Forest Products, Ltd., Harrison Mills camp.

JUST 12 OUNCES OF OIL EVERY 16 HOURS

keeps this
6-foot band saw
running smoothly
with

ALEMITE OIL-MIST

AUTOMATIC LUBRICATION!



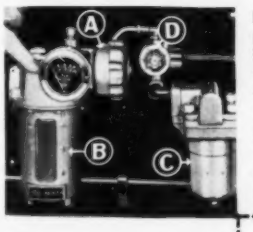
It takes just 12 ounces of oil and 60 seconds of a man's time every other shift, to lubricate the eight four-inch arbor bearings on this big band saw at the Rickini Lumber Company in Saginaw, Oregon.

But lubrication at the Rickini mill hasn't always been that fast and economical. Hard man-hours were spent hand-lubricating machinery. Grease mixed with sawdust, causing fire hazard. Bearings ran hot or burned out. Replacing them was causing frequent and costly shutdowns.

"Then Alemite Oil-Mist Automatic Lubrication gave us a fast, sure cure for lubrication headaches," says the Rickini superintendent. "The hard-to-reach pit bearing on our band saw is just one example.

"Oil contamination by water and sawdust caused this bearing to burn out every few months. But in the year and a half since we installed Alemite Oil-Mist, *we haven't had a single replacement!* Alemite Oil-Mist provides a constant, clean, accurate supply of oil automatically. And, what's more, I don't have to crawl into that dirty pit any more!"

The Rickini mill also uses Alemite Oil-Mist to lubricate a 17-ladder trimmer and a 52-inch edger. Find out how this efficient, foolproof system can increase lumber output and lower costs for *you!*



How it works. Alemite Oil-Mist is a completely enclosed system which atomizes oil into minute particles, distributes it through tubing to bearings, where it forms a uniform, cooling film. Suitable for bearings designed for either oil or grease.

A. Air Regulator
B. Oil-Mist Lubricator
C. Water Separator
D. Solenoid Control

Lubricates ALL Types of Mechanisms

Anti-friction Bearings | Plain Bearings | Chains | Gears | Gear Cases

ALEMITE

REG. U. S. PAT. OFF.

OIL-MIST

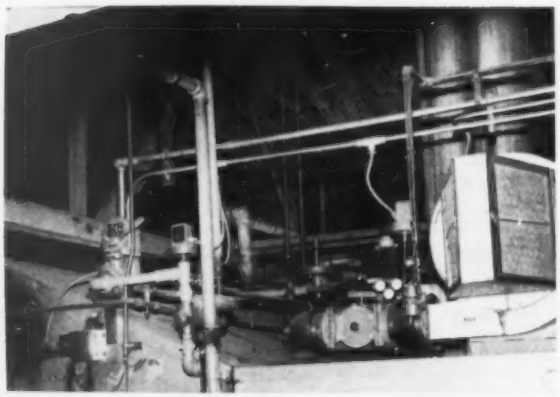
A Product of STEWART-WARNER CORPORATION
Chicago 14, Illinois

STEWART SW WARNER

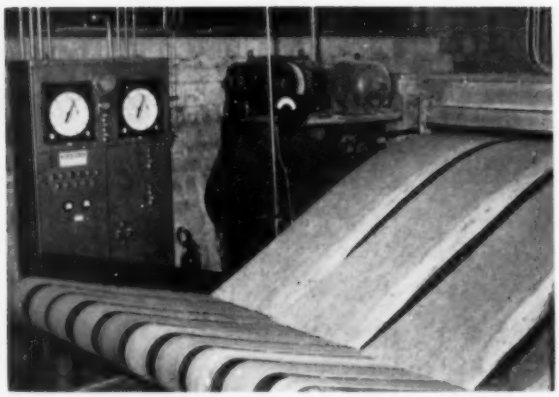
Alemite Division of
Stewart-Warner, Dept. HH-66
1850 Diversey Parkway, Chicago 14, Illinois

☐ Please send me a FREE copy of your new and complete OIL-MIST catalog.
☐ Please have your Alemite Lubrication Representative arrange a no-obligation demonstration.

Name .....
Title .....
Company .....
Street .....
City ..... State .....



GAS AND AIR ARE MIXED in this piping and valve assembly atop dryer. Air enters filter (right), then is mixed in tee with gas and leads into burner. In case of flame failure, a flame electrode monitoring burner insures positive shut-off of main.



CONTROL CENTER for the gas-fired veneer dryer is located near outfeed end of the dryer. Controls are push buttons; colored lights indicate proper sequence. Desired temperature of circulation into dryer is dial-set, then it is automatically maintained.

How Gas Changed the Picture

Veneer drying by gas opens the door for greater production at less cost

SUBSTANTIAL ECONOMIES in plant operation plus significantly increased veneer drying capacity, as a result of converting to a direct gas-fired dryer, are reported by Rainier Plywood Co., Tacoma, Wash., manufacturers of Douglas fir plywood.

To date, only a handful of plants in the west coast softwood plywood industry have utilized gas instead of the conventional dryers which employ steam derived from oil- or wood-fired boilers. However, the natural gas transmission network reaching the coast this year is stimulating considerable interest among plywood operators in this new type of drying.

The 14-section Coe dryer at Rainier Plywood is currently operating on propane, although it will be a simple matter to switch over existing plant transmission lines to take natural gaas when it is available.

"FAR-REACHING significance" to both natural gas and plywood industries is how BERNARD T. POOR (middle), Vice Pres., Wash. Natural Gas Co., termed Rainier's contract for 160,000 cu. ft. of gas daily. Explaining dryer operation above is GEO. F. BAUM, Rainier Pres., and STAN WINTER, industrial sales manager for the gas co. in Tacoma area.

Overall cost of dryer operation with propane gas is about 25% less than it was with steam. Through increased capacity by conversion to gas drying, the plant requirements for dry veneer can now be met in five days instead of seven, eliminating expensive week-end operation of the dryer. With natural gas, the fuel costs will be reduced substantially.

Rainier has done away with another major expense, that of maintaining and operating a steam boiler plant.

From the fire prevention standpoint, there is much less worry and danger. Chances for explosions or fires in the dryer itself are minimized; and, since the boiler has been removed, the danger there is eliminated entirely. The hazard of fires due to overheating of solidified pitch on pipe and other metal surfaces is reduced.

Pitchy substances or other volatile matter from the drying veneer is picked up in the circulation stream that passes over the burner through the flame and is burned—thus producing considerable additional heat.

The dryer operation is controlled from a stop-start push button control panel located near the outfeed end of the dryer. A signal light system has been incorporated into the controls so that proper sequence will always be followed. Before the gas can be lit, the dryer is blown free of collected gases and thoroughly ventilated. Then to start dryer, the operator pushes a button on the control panel and manually opens a reset valve for each zone.

SPECIALLY DESIGNED burners are employed; they are of the super ribbon type and are suspended in the high velocity circulation steam between the fan outlets and the downcomer ducts leading to the dryer itself.

Protective devices will effect an instantaneous shut-off and sound an alarm in case of emergency, such as flame or fan failure, gas pressure failure, power failure or overheating.

After the dryer is started, temperature control becomes automatic. The operator can indicate the desired temperature on the control panel.

Moisture content of the dried veneer is continually checked with an automatic meter.

(Continued on page 145)

Rainier Orders Second Hot Press for Exterior Plywood

The advent of gas drying of veener is opening the door for a new phase in the operation of the Rainier Plywood Co. plant at Tacoma. Stepped-up drying of veneer has prompted the company to order a new 12-opening Meiki hot press and an Oilgear hydraulic system to operate in addition to its existing 12-opening Columbia hot press. Pres. Baum states that the new equipment was ordered on the basis of tests made by adhesives experts.

American-Marietta Co.'s laboratory in Seattle made extensive tests on the gas-dried veneer, both in Douglas fir and hemlock, and found it to be well suited for production of exterior plywod. H. M. Preusser, technical service manager for A-M, said that it will be possible to obtain mill production capacity for hemlock comparable to fir.

It is believed the Tacoma plant will be the first one in the industry to operate two 12-opening hot presses. By proper timing of pressing, it will be possible to obtain doubled production without greatly increasing other plant facilities and manpower.

Philippine show chooses Washington Trakloader to cut cost of mahogany logging

When the Nasipit Lumber Company Inc. decided to replace their old logging methods with new, they chose Washington Iron Works equipment. Conventional Washington yarders have been used for some time on the Nasipit show and early this year a model TL-15 Washington Trakloader was shipped to the island of Mindinao. Now in full scale operation in one of the largest mahogany shows in the Philippine Islands, this Washington Trakloader is already cutting costs.

Here is proof the Trakloader can fit into every kind of logging show where big timber must be moved quickly and economically. Trakloader owners will tell you that no other mobile machine designed from the ground up expressly for logging can match the performance of the Washington Trakloader . . . loading, traveling and yarding.

There are four models of the Washington Trakloader for every timber operation. See your Washington dealer or write direct to the factory for complete specifications.

NEW 8-MINUTE FILM IN COLOR AND SOUND

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WASHINGTON IRON WORKS

1500 Sixth Avenue South, Seattle 4, Wash. **Elliott 1292**

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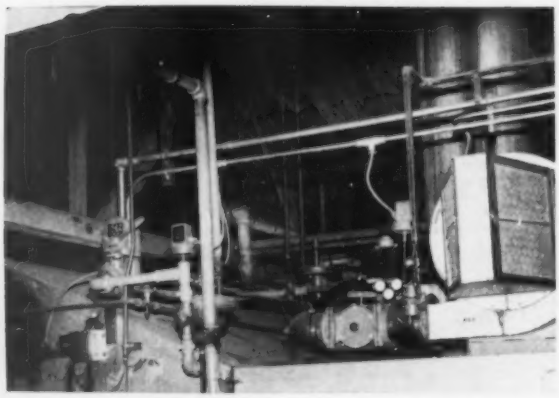

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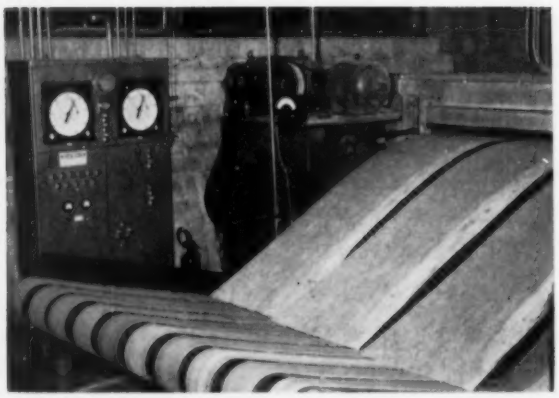

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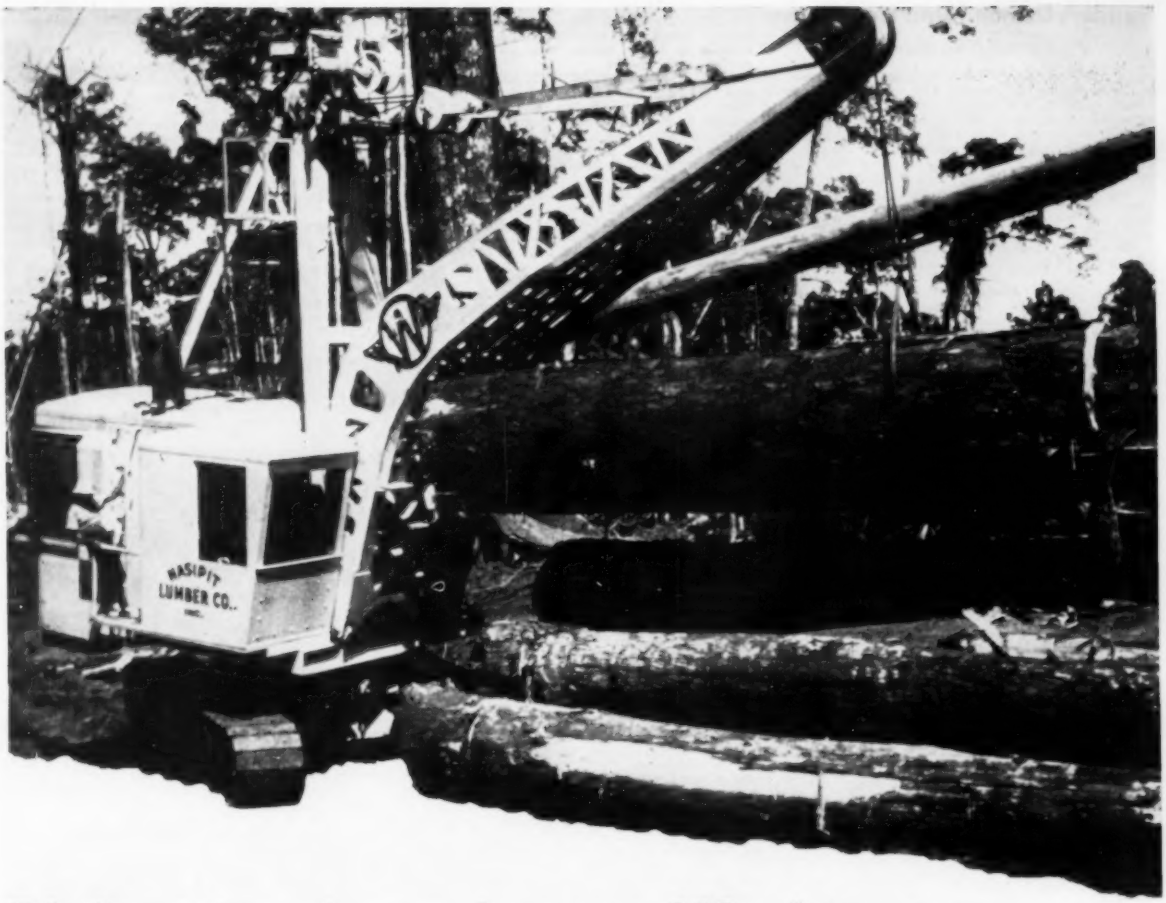

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WASHINGTON IRON WORKS

Unit Handling Review

Builders Demand Unit Handling

(Continued from page 76)

ing and shifting the load into alignment without moving the truck was first developed for stacking lumber. Later, it was found that the operator could swing and shift the load while the lift truck was in motion. This has proved highly practical for speeding truck loading, carloading and stevedoring, with more flexible action in narrow aisles or confined quarters.

Due to demand, Swing-Shift units are now available through lift truck dealer organizations and manufacturers as original equipment. Installation time is from 2 to 4 hours.

Swing-Shift specifications for various models of lift trucks are:

Make of Truck	Model Swing-Shift	Side Shift	Side Shifts	Swings or Pivots
BUDA				
FT-30,	BU-37		8"	22°
FT-40,	BU-75		10"	22°
FT-75		BUS-37	10"	
CLARK				
Y-150,	CL-35		8"	22°
Y-180,	CU-67		10"	20°
Y-200,	CY-150		12"	16°
Utilitrucs and Carloaders.	CY-200		12"	16°
TOWMOTOR				
Models 390,	TU-37		8"	22°
420, 460 and 500.		STU-37	8"	
HYSTER				
Models UC-30,	HU-37		8"	22°
		SHU-37	8"	
YC-40, HC-50,	HYTU-37		8"	22°
		SHTU-37	8"	
YT-40, XA-60,	ZA-68		10"	20°
		SZA-68	10"	
ZA-80, RT-100,	RT-150		12"	16°
		SRT-150	12"	
RT-120, RT-150,	SC-180		12"	16°
		SSC-180	12"	
RC-150, RC-160,	TC-200		12"	16°
SC-180 and TC-200.				
GERLINGER				
S-12 to S-16,	GSC-180		12"	16°
		SGSC-180	12"	
L-12 to L-15	GLC-180		12"	16°
L-12 to L-20.		SGLC-180	12"	

HYSTER COMPANY, P. O. Box 4318, Portland 8, Oregon.

Manufactures a complete line of fork lift trucks and carriers basically equipped for lumber handling.

The Swing-Shift Unit is available for Hyster trucks.

In addition, Hyster manufactures its own hydraulic side-shift carriage, for special load positioning, left or right. It is available for lift truck models ON-20, VE-30, YE-40, HE-50, VC-30, YC-40, HC-50, XA-60 and ZA-80. Rated lifting capacities range from 1730 pounds to 7420 pounds. Side shift is 4 inches each side of center.

On Hyster models RC-150, RC-160, SC-180 and TC-200, the hydraulic side-shift attachment has rated capacities ranging from 13850 pounds to 17900 pounds. Side shift is 6 inches each side of center.

The Hyster lift truck line is also adapted for job attachments, tools and accessories made by other companies.

This includes the M. H. End Loader and the S&T Side Shift and Tilting Apron.

Hyster also manufactures load arm extensions. These are for handling lumber loads whose center line extends beyond the reach of the regular fork arms.

These range in extension from 42 to 96 inches. They fit lift trucks from 2000 to 20,000 pounds in capacity. Chief advantage of the extensions is that they lie on the ground and the forks can be driven into them. A load can be left on the extension forks and picked up later. There is a bolt and nut for locking the extensions to the forks, if desirable.

M. H. EQUIPMENT, INC., 2312 S. Adams St., Peoria, Illinois.

Manufactures the M. H. End Loader which loads packages of lumber by the end of the package. It can place packages in or take them out of bins. It mounts on any fork truck, is easy to install, and can be picked up or released as easily as a pallet.

The only manual operation involved is the coupling or uncoupling of two quick couplers at the apron of the lift truck. With the exception of two short sections of hydraulic hose, all hose, couplers, headers, etc., are mounted on the truck in the same manner as any other hydraulic equipment.

The attachment weighs about 700 pounds. The standard End Loader is available in 42 and 52 inch widths. Other sizes can be obtained on special order. A double cylinder M. H. End Loader is available in package sizes. It is recommended that the loader be used with a side or swing shift. Rated lifting capacities range from 1900 to 6400 pounds for various Hyster models, for 18-foot lumber and from 3500 to 11700 pounds for 8 foot lumber.

YALE & TOWNE MANUFACTURING COMPANY, Materials Handling Division, Philadelphia 15, Pennsylvania.

Manufactures the Yale Swing Shift attachment, Model No. 01040, available for lift trucks in the capacity range from 3000 to 10,000 pounds. Applied to fork trucks, it enables the operator to swing forks 10 degrees to the right or left, for a total swing of 20 degrees, and to shift sideways 4 inches each side of center for a total shift of 8 inches. Lifting capacities range from 1800 to 7500 pounds, according to various truck models.

ALLIS-CHALMERS MANUFACTURING COMPANY, Buda Division, Harvey, Illinois.

Manufactures the Allis-Chalmers adjustable fork side shifter. It is available for installation on all models of Allis-Chalmers "FB" and "FT" series fork lift trucks, from 3000 to 8000 pound capacities. It is made up of two carriages and is equipped with a hydraulic double acting cylinder, which shifts the forward-most carriage 4 inches to either side of center. It swings a total of 22½ degrees. Lift capacities range from 1800 to 6800 pounds.

THE FRANK G. HOUGH COMPANY, Libertyville, Illinois.

Manufactures the standard line of materials handling Payloaders (see THE LUMBERMAN, October 1955). Lumber handling applications are shown in accompanying photos.

TOWMOTOR CORPORATION, 1226 East 152nd St., Cleveland 10, Ohio.

Manufactures the Towmotor Hydraulic Roll-Off Accessory for lumber handling. It consists of two roll-off units, each in effect a hollow fork with a roller attached to its outside edge, mounted sheath-like over a standard Towmotor pallet fork. The combination roll-off unit-standard fork is attached to the Towmotor by simple suspension from the support shaft on the lifting carriage. The device is then connected to the main hydraulic system with quick-detachable couplers. The operator controls it with a single valve lever.

The Roll-Off Accessory stores unit loads of lumber lengthwise in stacks without manual handling. The load is rolled sideward into storage. Serrated edge at tip of each fork unit, which provides grip when pushing or pulling lumber lengthwise, is removable when standard pallet loads are to be handled.

THE BAKER-RAULANG COMPANY, 1250 W. 80th St., Cleveland 2, Ohio.

Manufactures the TRAVELOADER, available in Models T-10A and T-30, each furnished in gasoline or diesel power.

This is a side-loader lumber handling machine, available in 10,000 and 30,000 pound capacities. A 6000 pound unit is being introduced. It combines the ability of the lift truck to stack with the advantage of the straddle carrier or flat-bed delivery truck in handling long loads at practical speeds, in relatively narrow aisles. It can carry and stack long lumber in 10 foot wide aisles.

Specifications are:

T-10A, 10,000 pounds capacity, torque converter, dual drive wheels, sprung chassis: 33-in. load center; 25 mph maximum travel speed while loaded; 30 mfp max. travel, speed unloaded; 12-ft. standard lift range; 22 ft. 7 in. turning radius; 138 in. wheelbase; 234 in. overall length; 96 in. overall width.

T-30, 30,000 pounds capacity, torque converter, dual drive and steer wheels: 39 in. load center; 10 mph max. travel speed loaded; 20 mph max. travel speed unloaded; 12 ft. standard lift range; 25 ft. turning radius; 185 in. wheelbase; 331 in. overall length; 108 in. overall width.

CLARK EQUIPMENT COMPANY, Battle Creek, Michigan

Manufactures two attachments for specialized lumber handling. The pivoted fork attachment (Y-150-S-1048 and 1049) and the swing shift device (Y-200-1069-1073) are available on both solid and pneumatic tired machines in capacities from 2,000 to 26,000 lbs., depending upon the application.

S & T EQUIPMENT COMPANY, P. O. Box 41, Mobile 1, Alabama.

Manufactures the Side Shift and Tilting Apron, for quick maneuvering and easier slope piling.

* * * * *

Other accessory equipment available by manufactures includes Easy-Entry plates for use with fork lifts. These permit loading big loads by increments. The plates can be inserted between any units on a pile, permitting the unloader fork to slide between them without damaging the boards.

Mills Try Experimental Shipments on Flat Cars

Lumber Mills

A comprehensive survey by THE LUMBERMAN shows that at the production end several mills have experimented in shipping lumber in open flat cars, either wrapped or unwrapped (see THE LUMBERMAN, January 1956). Not many of them, at present, are continuing to do so.

Here are their reasons for not adopting package handling of lumber as a standard practice:

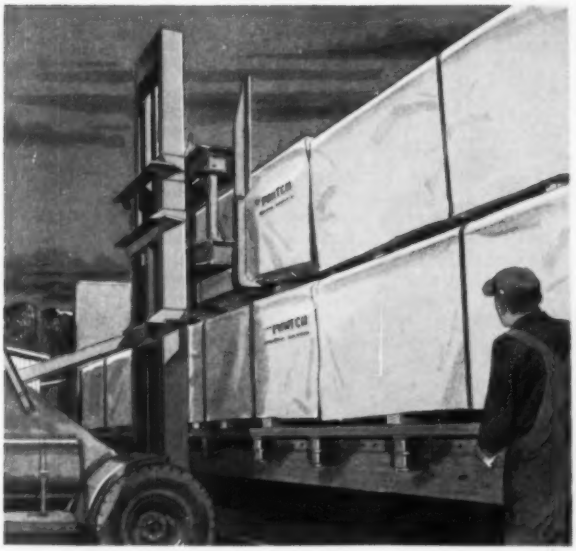
- There is a deep-seated reluctance to change traditional methods of handling lumber.
- It costs from $5 to $7 per M board feet (this includes labor in packaging, costs of straps, paper covers, etc.) additional over box car shipments and the mills can't absorb this extra cost.
- Retailers, as yet, won't absorb the increased cost.
- There is no widespread experience in the reliability of waterproof, reinforced paper as a protector. Such questions as waterproofness and the desirability of a bottom cover need to be answered.
- Mills fill their lumber orders in random length shipments. Customers order a carload of lumber with certain percentages of certain lengths. Mills place an upcharge on lumber of specified lengths in exact quantities.
- Mills are not set up to pull given lengths of lumber from the sorting chain. It would be necessary for them to reorganize their mill so they could pull to length. They would also have to lay out an assembly

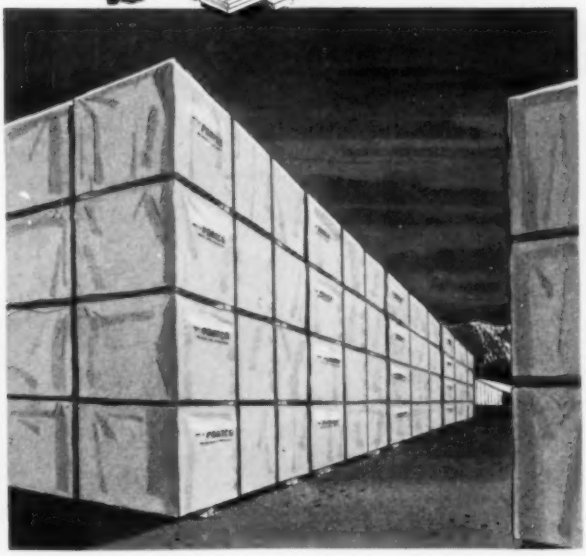
(Continued on page 110)

protect for profit with

PORTCO WEATHERPROOF COVERS

for SHIPPING and OUTDOOR STORAGE of LUMBER, MATERIALS





apply these advantages of protected, packaged units to your operation:

FOR THE MILL

- Reduce Loading Time.
- Utilize flatcar shipments.
- Cut handling costs.
- Identify mill and product.
- Speed delivery.
- Utilize outdoor storage

FOR THE YARD

- Eliminate down-grading of materials.
- Protect from pilferage.
- Quick identification.
- Simplify inventory control.
- Identify yard with quality.
- Eliminate need for additional sheds.

Packaged lumber, plywood and other building materials simplify and streamline the merchandising and handling from manufacturer to customer. Portco's reinforced paper covers —for flatcar shipment and outdoor storage— are easy and fast to use, save labor, time and material costs.

Portco covers are available in a complete range of standard sizes... can be used again and again.

For further information and prices, check with your paper jobber, lumber distributor or send the coupon below to Portco.

PORTCO CORPORATION
PAPER and PLASTIC DIV.
VANCOUVER, WASH.

PORTCO CORPORATION L
VANCOUVER, WASHINGTON

Please send information regarding sizes and prices of reinforced, paper lumber covers.

NAME_____

COMPANY_____

ADDRESS_____

CITY_____ ZONE____ STATE_____

Unit Handling Review

Builders Demand Unit Handling

(Continued from page 108)

yard for the accumulation of unit loads of a given length.

- Loading and shipping platforms were installed for box car loading. Accessibility for package loading with lift trucks requires open-area, platform-free maneuvering space. Older mills object to revamping their loading facilities.
- Mixed cars are common in the shipment of lumber products. There may be 25 or 30 widths, lengths, grades and types of lumber. Mills state emphatically that this type of order is not adaptable to flat car loading.

ON THE COST FACTOR, mills object to the cost of stakes presently used on open car shipments. They cost approximately $1.25 each. Some cars contain 30 of these stakes. Therefore, development of a stakeless load offers the greatest potential in cost savings.

The Cascade Lumber Co., Yakima, Wash., has shipped approximately 100 carloads of lumber from Goldendale, Wash., to Yakima, using a variation of the stakeless flat car load developed by the Southern Pacific Co. (see diagram). This was green material, not wrapped with covers. Both inspecting railroad and mill officials report that these shipments have gone through without any mechanical troubles or load shifting. This method is not approved by the AAR for interchange shipments and can travel only under special permit on transcontinental routings. The packages could be wrapped for kiln dried lumber.

It is impossible to make an accurate labor cost comparison between the present method of box car loading and the proposed flat car method. The present method of loading box cars, by contract or day labor, costs from $1.25 to $1.50 per M board feet. The present method of loading out flat cars with staked loads is roughly the same, but in addition, there is the additional cost of stakes, plus the unit straps and over-the-top stake connectors.

The proposed method of shipment may average $1.00 per M board feet for strapping and $1.50 per M for paper covers. Mills, as set up today to ship random lengths, would add to their labor to make up such units. However, most mills acknowledge that if they were to set up purposely to pull-to-length and utilize an assembly yard, labor to load flats would be no more than the conventional method.

OFFSETTING THE COST of strapping the covered packages are the savings when a dealer unloads the car in an hour contrasted with one to two days by hand. Thus, it seems logical that the dealer should participate in the storage and cover costs since he is a beneficiary of the project.

Sterling Lumber Co., Chicago, Illinois, has shipped stocks of industrial lumber from Goodwater, Ala. to Chicago. Many of these were on the company's own fleet of flat cars equipped with bulkheads. John Moeling, president, finds the method satisfactory.

The Southern Pine Association has conducted experiments in loading packaged lumber into box cars with 15-foot doors and 20-foot doors. It took 2 hours, 15 minutes to load 25,520 board feet of packaged lumber with a lift truck into the 15-foot door car and one hour and 16 minutes to load the 20-foot door car and one hour and 16 minutes to load the 20-foot door car with 24,869 board feet of packaged lumber. These were tests only and time could be saved with more experience. The new type cars promise to meet the needs of the lumber industry.

Plywood Mills

Not as many test shipments have been made on plywood. The manufacturers are interested, but no conclusions can be drawn as yet. Tests are still underway. United States Plywood Corporation made one shipment on a bulkheaded flat car from Anderson, Calif., to its Brooklyn branch, under adverse weather conditions. It arrived in excellent shape. The method seems to offer excellent possibilities, especially if shipments are going to large construction jobs where cars can be unloaded at the site with large capacity fork lifts.

The Douglas Fir Plywood Association believes that securing the load to the car still poses problems. Bulkheaded cars have proved most effective, but aren't available in quantity. A stakeless method, when developed, may prove most efficient. Spokesmen state that many plywood mills, too, do not have proper platform loading facilities for efficient use of fork lift trucks on flat cars.

Protective coverings must be used on plywood. It can't be shipped exposed to the elements.

Additional cost of loading would be offset by advantages to the consumer, especially where plywood is used on large projects.

Oregon Mill Finds Method Advantageous

Oregon Alder-Maple Co., which has a 60M per day sawmill in conjunction with kilns and planing mill at Willamina, Ore., is in its second year of shipping Sisalkraft-wrapper lumber packages on open rail cars. According to Floyd ("Scotty") Edmiston, superintendent of yard, kilns, planing mill and shipping, about 15 percent of the plant's annual shipments of coniferous lumber goes this way. During periods of car shortage, wrapped package shipment increases to around 75 percent.

Although improvements to the firm's loading area have not yet been completed, plans call for a simple, ground-level, hard-surface area on each side of the loading spur so the cars can be loaded by lift truck from both sides. As yet all loading is with lift truck from just one side.

A wrapped package to be loaded at the far side, against car stakes already in place, is placed by Hyster lift truck on 3-inch thick separators (laying crosswise of the car) A short piece of 4x4 is then placed on each fork arm in sloping position, leaving the fork ends free to engage the package. With the blocks against the package, and the fork ends lifting from beneath to give tractive weight, the lift truck slides the package across the car as far as possible.

ALTHOUGH THE PACKAGE is not yet in position against the stakes, a second package is then picked up with the lift truck and moved into position alongside the first unit. The 4x4's are placed endwise between the two packages—the first unit still riding on the 3-inch separators and the second one on forks of the lift truck. By moving the lift truck forward the original package slides into final position so the rub strips affixed to outside of the package makes firm contact with the vertical stakes.

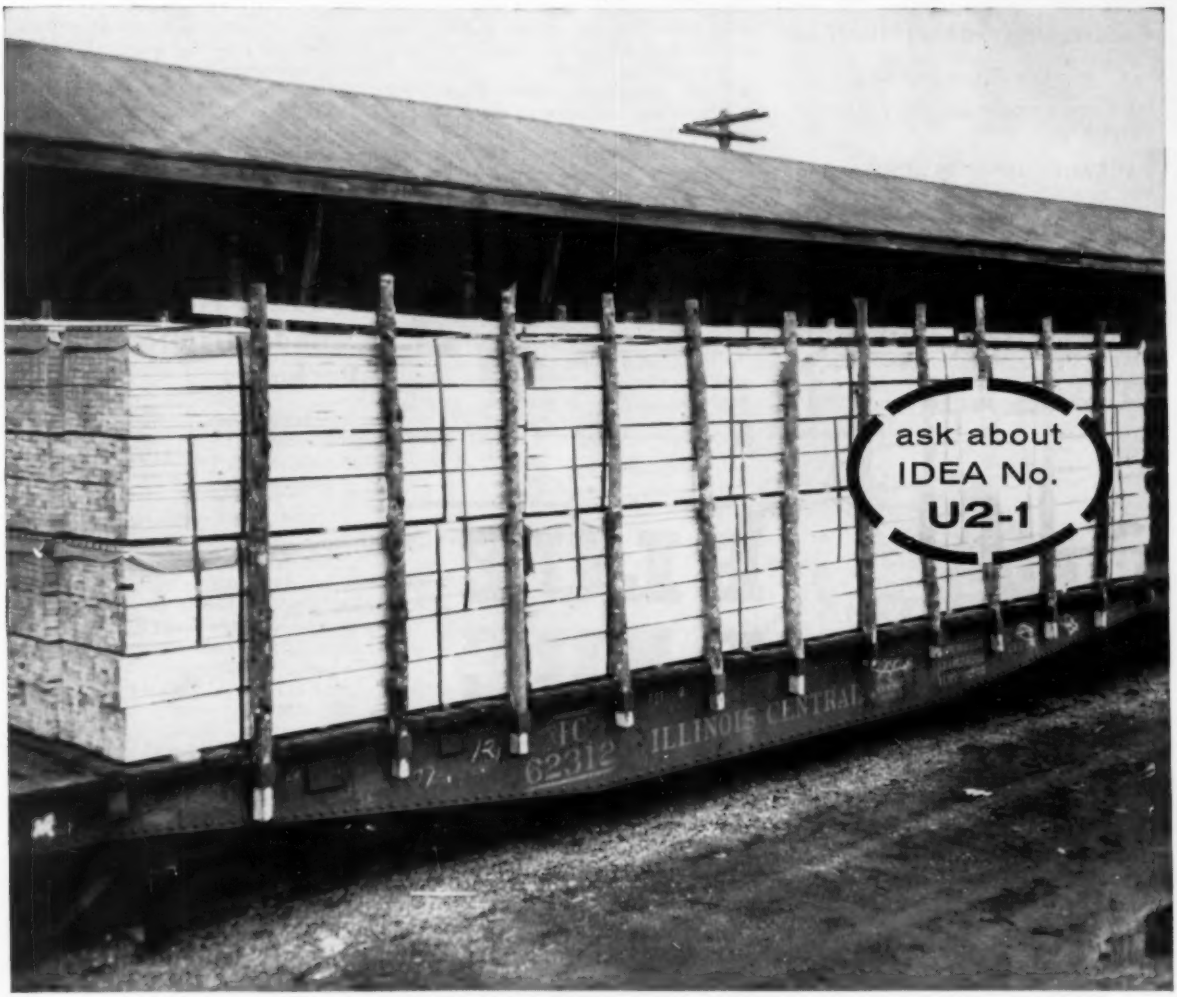
The company uses American Sisalkraft's Fibreen waterproof industrial paper for wrapping the open-car packages. A lumber package, ready for wrapping has two sets of stickers which divide the unit into three horizontal components of approximately equal size. The lumber is held firmly in place by ¾-inch Acme Unit Load Bands—three applied to each package prior to wrapping. None of these bands encircle the whole unit. Two bands—one near each end—go around the top two-thirds; the third band, applied at the center, takes in the bottom two-thirds.

This package unitizing system results in securing the center one-third in three places. The middle third is pulled downward by the bottom bands and both end bands pull upwards on the same stock. According to Edmiston, all stock in the package is thus securely held, keeping the lumber in place even though the car may be handled roughly. He says car humping of clear-around strapped packages may result in stock sliding from center of package, but this had not occurred with the two-under, one-over combination.

Sisalkraft paper, 11 feet wide, is unrolled over the unitized lumber package and cut to length with sufficient overhang to completely cover the unit all around except for the bottom. Simple "hospital folds" are made at the ends and secured with Permacel waterproof tape.

Subsequent to wrapping, the unit is bound with steel Unit Bands—one wrap at each end. Metal shoulders at

(Continued on page 112)



Ask your AIM*. . . Sterling Lumber did and now . . .

Faster shipments, better arrival conditions result

Acme Idea Man Julian Scott cooperated with Sterling Lumber in setting up this car loading system

ACME STEEL STRAPPING and the new Interlace method of securement on flat cars, now insure faster lumber shipments for Sterling Lumber and Supply Company, Goodwater, Alabama. Notice the neat, orderly packages in the Interlace-secured lumber shipment above after a trip of 719 miles. (Idea No. U2-1.)

Shipments arrive faster because delays to re-cooper are rare. One operator with a lift truck loads or unloads faster than before. Larger, neatly packaged units mean more efficient use of storage space and better inventory control.

***Ask YOUR Acme Idea Man** for the free Interlace specification booklet. Have your very next order shipped the Interlace way by passing the booklet on to your mill. Write Dept. AA-66, Acme Steel Products Division, Acme Steel Company, 1025 Sixth Ave., S. Seattle 4, Washington, also Portland, Oregon.

ACME STEEL STRAPPING ACME STEEL

Unit Handling Review

Builders Demand Unit Handling

(Continued from page 110)

top corners protect the paper from the strapping.

PACKAGES TO BE PLACED next to the carstakes are equipped with 1x4 or 1x6 rub strips placed near top and bottom of one side to prevent paper damage during shipment. The exterior steel bands secure the rub strips in position.

Superintendent Scotty Edmiston reports regarding Oregon Alder-Maple Co.'s open-car paper-wrapped lumber shipping:

- Customer cooperation is needed to facilitate placing orders making up packages containing stock of but one size and length.
- Units containing more than one length require twice as much wrapping time.
- Load two packages high, 9 x 14 packages per car.
- Wrapping and unloading of mixed-length packages cost $2/M more than in-place boxcar loading; costs run approximately same as for boxcar loading if customer takes full packages of single size and length.
- Except for wrapping, this system presents no additional problems over regular open-car loading.
- Why Oregon Alder-Maple ships coniferous lumber in wrapped packages on open cars: Quickly, easily and cheaply unloaded at destination, eliminates shed storage at destination, lumber arrives clean and bright, makes for shipping kiln dried lumber in other than closed cars, can obtain "flats" when closed cars are not available, wrapped units effectively provide dry storage at jobsite until lumber is used.

BLUE BABE ® Products
NORTHWEST MARINE IRON WORKS PORTLAND, OREGON

BLUE BABE

VENEER CLIPPERS

will save you labor and speed production

SEE YOUR DEALER OR WRITE DIRECT

NORTHWEST MARINE IRON WORKS

DESIGNERS OF SAWMILL AND LOGGING EQUIPMENT

2516 N. W. 29th AVE. Industrial Division PORTLAND, OREGON

Industry Needs Size Standardization of Packages

Agreement is needed upon standardization of lumber package sizes, so lumber covers can be fabricated to fit and so that car loadings can be simplified.

Widths of flat cars vary. The majority are 9 feet, 2 inches between stakes, but the range is from 8 feet, 10 inches to 9 feet, 6 inches. The pending proposal before the AAR calls for two 4-foot units acros the car with no filler block in the center. The space between the outer edge of the bundles and the stake pockets is transversed by .050 steel strapping.

The pine industry seems to offer greatest potential for shipping covered lumber packages. Reasons:

- Product is 100 percent kiln dried.
- Upper grades are pulled to length and the units are adaptable to covered packaging.
- Selling price is high enough to warrant protection and added cost.

There is a need for standardizing pine and fir packages on width and height. Pine at present is put up in units closer to 3 feet than 4 feet. Bulk of pine shipments are in boards, with the following standard load widths:

Six 6-inch boards (Package width approximately 35 inches)
Four 8-inch boards (Package width approximately 31 inches)
Three 10-inch boards (Package width approximately 29 inches)
Three 12-inch boards (Package width approximately 35 inches)

On the present pine basis three loads could be placed across a car.

THERE IS NO RULE of thumb on height. Proposal before the AAR is for a 3-foot 4-inch height. Only limits are lift truck capacity and economy of packaging at the mill. Two small a unit is too costly. From 1600 to 2500 board feet seems a desirable range.

One dealer recommends this range of packages:

Dimension	No. of Pieces	Thickness of Package	Width of Package
2x4	100	10 pieces	10 pieces
2x6	60	10 "	6 "
2x8	40	10 "	4 "
2x10	40	10 "	4 "
2x12	30	10 "	3 "
1x6 (sheathing)	150	25 "	6 "

Acme Steel Co. has also published a list of recommended sizes for lumber packages.

ATKINS

has a tooth for every job!

Atkins is the oldest manufacturer of band saws in the United States and now is celebrating its one-hundredth year of quality saw manufacturing. With this experience, you are assured of the finest saws available today. Made of Atkins Silver Steel, heat treated and tempered by methods exclusive to Atkins—ground and tensioned by skilled saw makers. There is an Atkins wide band pattern for every job.

You can't buy experience, but you can buy the result . . . buy Atkins!

ATKINS Silver Steel SAWS

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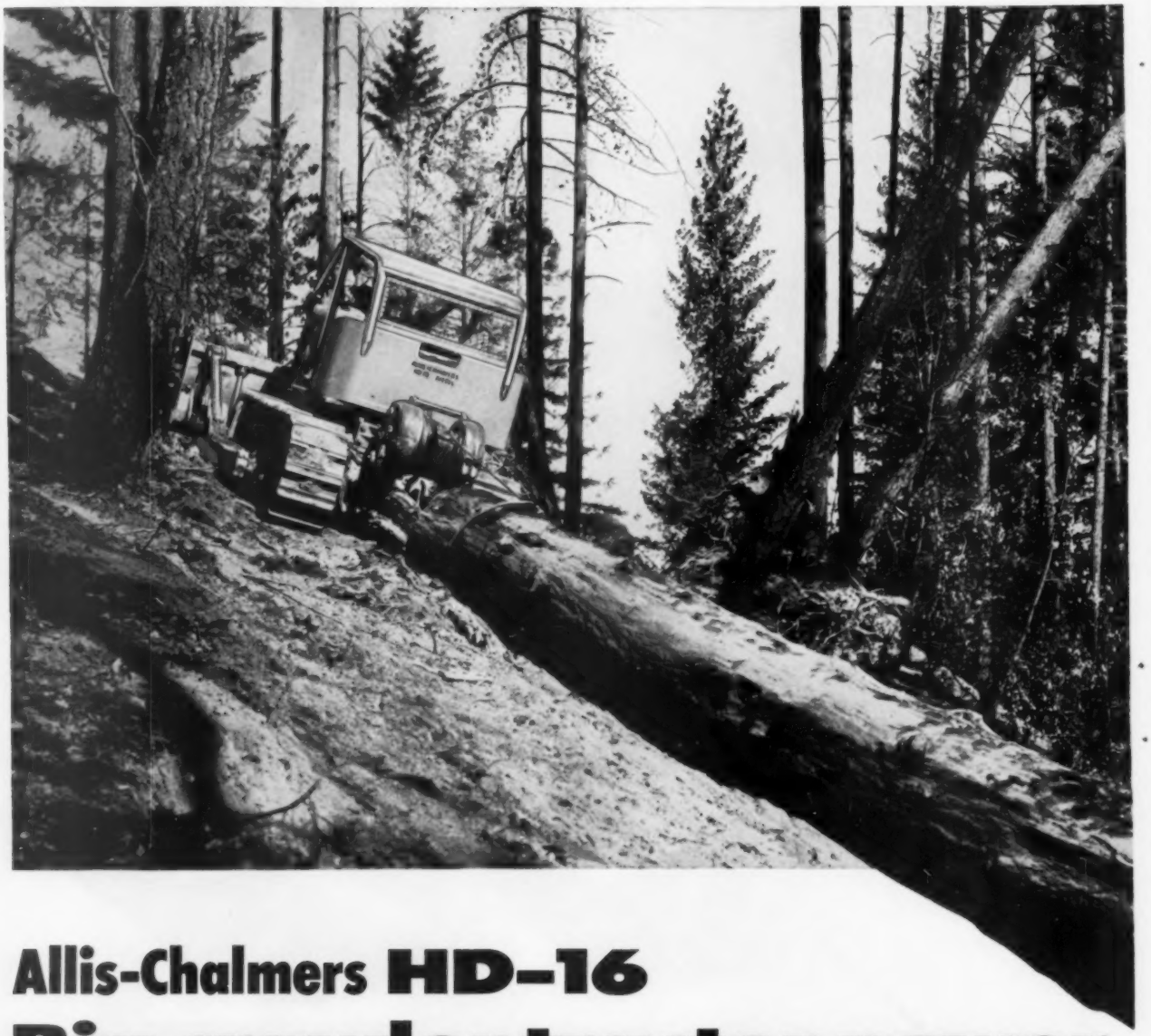
BRANCHES: Chicago • Philadelphia • Los Angeles • Chattanooga • Portland, Ore.

1856 • ONE HUNDRED YEARS OF SAW EXPERIENCE • 1956



Allis-Chalmers HD-16
Big crawler tractor power for tough logging jobs

The Allis-Chalmers HD-16 crawler offers more of everything you want for heavy-duty logging. It has long-life Allis-Chalmers diesel power . . . almost 16 tons of balanced tractor weight, plus strength to take advantage of this power.

With either job-proved torque converter drive or easy-shift standard transmission, the HD-16 gives a new high in tractor-operator efficiency . . . sustained high output, low job costs.

In addition, the HD-16 has many outstanding features for dependability and easy servicing: all-steel box-A main frame; unit construction; simplified lubrication; straddle-mounted final drive gears on tapered roller bearings; True-Dimension, heat-treated track; wrap-around radiator guard.

See your Allis-Chalmers dealer and learn about *all* the top features of the HD-16 . . . ask for a demonstration and see how such features can benefit your logging operations.

ALLIS-CHALMERS, CONSTRUCTION MACHINERY DIVISION, MILWAUKEE 1, WIS.

Bulldozing. Working for Bud Ryerson of Weitchpec, California, this HD-16 cuts a logging road through the Klamath River canyon. One big advantage of the HD-16 on tough work like this is its all-steel box-A main frame which absorbs shock loads . . . protects the engine, clutch and transmission . . . provides longer tractor life.

Yarding and Skidding. Hydraulic torque converter drive—pioneered in crawler tractors by Allis-Chalmers—automatically matches power to load. This HD-16—working at Mendocino, California—moves a big fir log up a steep slope at the fastest possible speed for Bernardo and Bernardo of Healdsburg.

Building and Maintaining Roads. Murray Timber Co., National, Washington, keeps its HD-16 working in the woods longer. One reason: simplified lubrication, including 1,000-hour lubrication intervals for truck wheels, idlers, and support rollers, provides extra working time.

HD-16

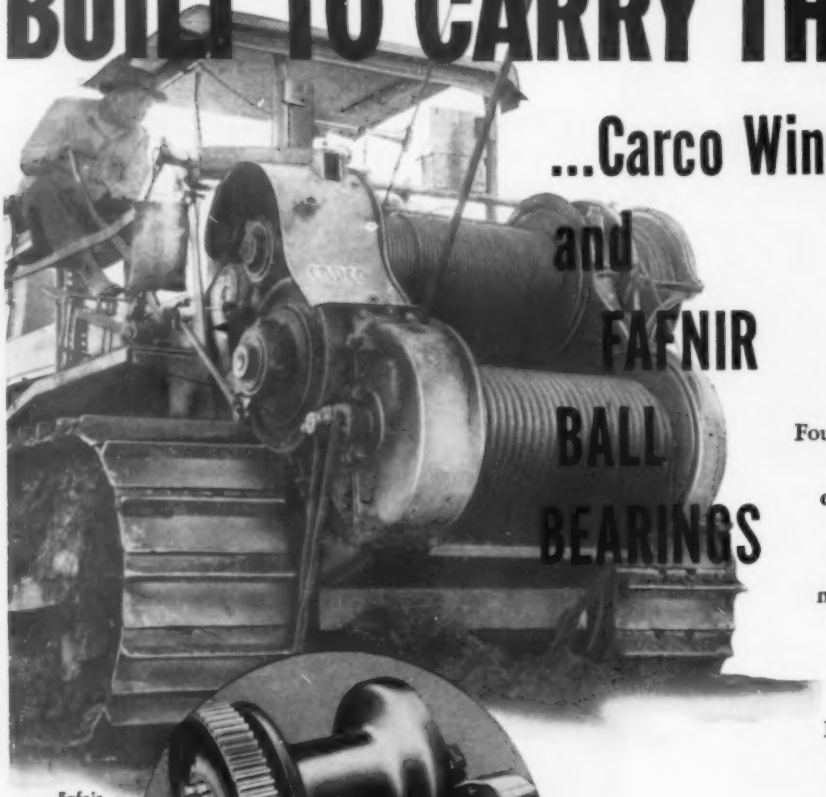
150 net engine hp • 31,600 lb • Torque converter drive

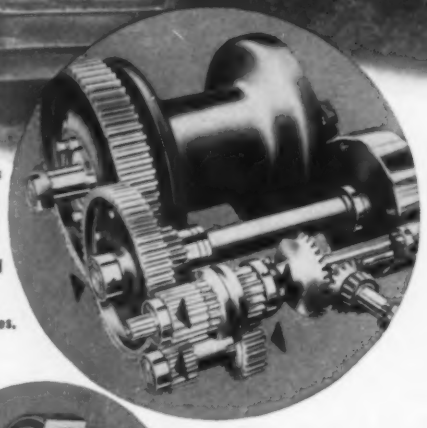
125 drawbar hp • 31,500 lb • Standard transmission

ALLIS-CHALMERS

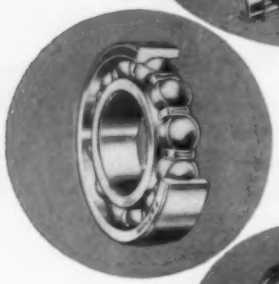
BUILT TO "CARRY THE LOAD"

...Carco Winches and FAFNIR BALL BEARINGS

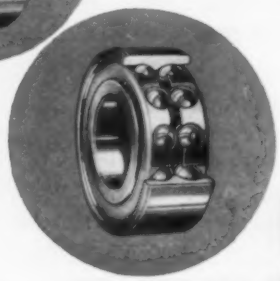




Fafnir Ball Bearings play an important part in the rugged efficiency and smooth workability of Carco Winches.



Fafnir W Type Maximum Capacity Filling Slot Radial Ball Bearing



Fafnir 5200 Series Double Row Ball Bearing

In designing their world-famous Carco Winches, Pacific Car and Foundry Company make certain that these rugged work-horses are equipped for trouble-free performance under punishing loads . . . smooth, instant response . . . and minimum maintenance. The result: Fafnir Ball Bearings at many vital turning points.

Fafnir W Type Single Row Ball Bearings, designed with deep races and a greater number of balls for higher radial load capacity, are found on the drum, brake, bevel gear, and countershafts. Fafnir Double Row Ball Bearings provide axial and radial rigidity on the brake and countershafts. Both types are equipped with single grease shields, to keep grease in, dirt and abrasives out, while permitting lubrication from the open side.

Chances are, *you* can eliminate trouble spots or increase operating efficiency in logging or sawmill equipment by using Fafnir Ball Bearings at important turning points. Ask your authorized Fafnir distributor for information about the wide range of types and sizes available. Or write The Fafnir Bearing Company, New Britain, Connecticut.

FAFNIR
BALL BEARINGS
MOST COMPLETE LINE IN AMERICA

Who Else Uses Packaged Lumber?

Besides the retailers, the railroads themselves are substantial buyers and users of lumber products. Extremely sensitive to unloading and storage costs, they are beginning to specify flat car shipments.

The Northern Pacific Railway, for instance, has over 41,000 freight cars in service and new building and rebuilding programs in progress almost continuously. Practically all of its lumber is obtained in the Pacific Northwest. It is processed thorugh the principal storage yard located at South Tacoma, Wash., and distributed from that point and Brainerd, Minn., over the line, as required for use.

To meet these requirements, a stock of 5 to 6 million board feet is maintained at South Tacoma and approximately 3 million board feet at Brainerd.

The company has worked out modernized sorting methods and mechanized handling at South Tacoma. Kiln dried lumber is wrapped and strapped for shipment on flat cars. The sides of the bundles are not covered. The railroad has found this very satisfactory.

The Western Pacific Railroad Co. has been interested in the shipment of paper covered lumber packages in open cars. The company has done considerable research on the shipment of kiln dried lumber. Test loads have been sent from the Pacific Northwest to Sacramento, Calif. Material was box car lining made up in packages.

SOME LOADS WERE fully papered, others partially wrapped. Test loads involved study of material handling costs: open car loads versus conventional box car loading and unloading, moisture readings at point of shipment and at destination and various methods of strapping and bundling packages on open cars.

The company believes this method of shipping dry lumber is practical and economical for the distance involved. Officials have made no experiments on transcontinental shipments and can make no statements on this.

CARLOAD of studs before the bump test.

NOTE SLIGHT shifting after impact.

What's the Outlook for Packaged Lumber?

Based on the facts presented here, THE LUMBERMAN believes that there is a firm need for the mills, lumber cover firms, steel strapping companies, railroads, retail dealers and lift truck manufacturers to cooperate still more closely in developing methods of unitizing lumber in packages, devising successful protective coverings, improving methods of shipping packaged loads in interchanges and helping the dealer merchandise the product more intensively. Not every item of lumber can be shipped in packages. But ordering systems can be changed and the consuming public can be educated to change its buying habits.

The main disadvantages now are largely cost factors. These can be overcome:

- If the mills will study their manufacturing processes and make a sincere effort to sort and package lumber.
- If the railroads will realize that their own freight tonnage future from lumber shipments depends on how they adapt their equipment and techniques to changing needs of the retailers as demanded by new merchandising trends.
- If the retail yards will mechanize their methods to fit packaging methods.

There is no place for apathy in the highly competitive building materials field. Consumers will demand more effective merchandising. The pressure wil come from the retailers and the mills should anticipate it.

Portco Lumber Covers

Stock Size	Cover Size Lgth.	Width.	Depth.	Approx. Bd. Ft. Per Unit	Cost Per M/B.F. (500 Bracket)	Wt. Per Cover
8'x48"x46	8'x6"	x48"x46"		1472'	1.74	10#
10'x48"x46"	10'6"	x48"x46"		1840	1.56	11
12'x48"x46"	12.6'	x48"x46"		2208	1.44	13
14'x48"x46"	14'6"	x48"x46"		2576	1.36	14
16'x48"x46"	16'6"	x48"x46"		2944	1.32	16
18'x48"x46"	18'6"	x48"x46"		3312	1.28	17
20'x48"x46"	20'6"	x48"x46"		3680	1.24	19

These Companies Use Covers

Lumber companies which have made or are making experimental shipments of paper covered lumber or use covers for merchandising include: Pilot Rock Lbr. Co., Pilot Rock, Ore.; W. W. Powell Lbr. Co., Spokane, Wash.; Western Pine Lbr. Co., Spokane; Heppner Lbr. Co., Elgin, Ore.; Evans Products Co., Coos Bay, Ore.; Intermountain Lbr. Co., Missoula, Mont.

Potlatch Forests, Inc., Lewiston, Ida.; Mt. Pitt Co., Central Point, Ore.; American Forest Products, Lakeview, Ore.; Georgia-Pacific Corp., Portland, Ore., Pack Rvr. Lbr. Co., Dover, Ida.; Boise-Payette Lbr. Co., Boise, Ida.; Twin Feather Mills, Kamiah, Ida.; Parrish Lbr. Co., Baton Rouge, La.

Pine Mt. Lbr. Co., Yreka, Calif.; Oregon Alder & Maple Co., Wilamina, Ore.; Long-Bell Lbr. Co., Gardiner, Ore.; McCormick Lbr. Co., Sheridan, Ore.; Winton Lbr. Co., Martell, Calif.; Oregon Lbr. Co., Dee, Ore.; Diamond Match Co., Chico, Calif.; Dwyer Lbr. Co., Portland, Ore.

Cloverdale Redwood Co., Cloverdale, Calif., Weyerhaeuser Tbr. Co., Longview, Wash.; St. Paul & Tacoma Lbr. Co., Tacoma, Wash.; C&D Lbr. Co., Riddle, Ore.; Cascade Lbr. Co., Yakima, Wash.; Pack River Lbr. Co., Dover, Ida.; Long-Bell Lbr. Co., Weed, Calif.; Sterling Lbr. & Supply Co., Goodwater, Ala.

Stakeless Method Tried

A new method that uses steel strapping to tie down lumber on flat cars without stakes, was subjected to shock tests at the Southern Pacific-Western Pacific interchange in west Oakland, Calif., last month.

Tests were organized by the On the Grounds Committee for Forest Products Loading of the Association of American Railroads, under the direction of L. T. Donovan, executive assistant to the executive vice-president and director of research, mechanical division AAR, from Chicago.

Cooperating in the tests were the Southern Pacific and Western Pacific railroad companies, the West Coast Lumbermen's Assoc., and manufacturers of steel strapping. Both railroads have been using this method of shipping lumber on their own lines for some time, as experimentation and for preliminary tests.

Acceptance of this method of shipping lumber by the AAR would mean that it could be shipped all over the United States.

Cars tested came from the Pacific Northwest and northern California and arrived at the west Oakland SP-WP interchange yards in good condition.

Car loads of studs, finished lumber and rough lumber were tested, by rolling them free, propelled by a diesel switcher, against a bumper composed of cars of scrap metal with brakes locked.

Cars being tested were bumped at various speeds, ranging from about 4 to 10 mph., and any resulting slippage and band breakage was noted.

A typical stud load was of six units long, and two wide, on the bottom of the car, and five units, two wide, on top. Each package was banded with two ¾"x.028 steel strapping. Then 12¾"x.035 steel bands were tied around the entire load. To hold the entire load 11 tie down straps were secured to stake pockets. There were 1¼"x.050.

A car of long lumber, 30 and 24 ft., finished, strapped with a series of 1¼"x.050 tie downs to stake pockets, and three 1¼"x.050 strapping for unit bands tieing the top and bottom packages into solid units was also tested.

On the second day of tests, two cars from Western Pacific, one rough lumber and the other surfaced 2x4's were tested. The rough lumber was tied down with 1¼"x.035 tie down straps into the stake pockets, and the eight units were bound together with ¾"x.035 steel strapping.

Following the tests there were two meetings in San Francisco, one of the on the grounds committee of the Forest Products Loading Committee of the AAR, and the other a meeting conducted by the WCLA with lumber shippers, both to discuss results of the tests and future plans.

Ask the man who moves mountains

Without him no structure, no road, no dam or development could happen. He whittles the earth into usable shapes with a fine steel blade. He smooths a way for progress.

NEW OILS FOR POWER

All these works are done with power, which we mostly take for granted. But there is nothing *indestructible* about it. On the contrary: the life of your modern diesel engine depends, literally, on very special lubrication! That's why Caterpillar Tractor Company has announced the need for a *new class* of oils–Superior Lubricants, Series 3, for diesel engines. They show many advantages over the older Series 2 oils which some people still use.

One of the *first* to meet these stiff specifications is Richfield's SUPER Circle C brand of motor oil. It is now recommended for use in a score of Caterpillar engines and noticeably improves the operation of many other makes. It reduces wear, lessens maintenance and parts replacement, keeps the engine cleaner and counteracts the effects of high sulfur fuels found here in the West.

PICK UP YOUR TELEPHONE

Arrange for a trial of Richfield SUPER Circle C Motor Oil. As any man who moves mountains will tell you, it gives *new life* to diesel engines!

FREE! Send for your copy of our new illustrated Diesel Lubricating Guide. Address Richfield, Lubricants Dept., 555 So. Flower St. Los Angeles 17, California

SUPER CIRCLE C ©

THE ADVANCED MOTOR OIL

FINE INDUSTRIAL LUBRICANTS FOR EVERY NEED

RICHFIELD

Plywood Department

"2.4.1," NEW STRUCTURAL panel, is a combination subfloor and underlayment which goes over floor framing system for one-piece base.

IN REMODELING JOB using 2.4.1, blocking is supported with lumber strips along lower sides of floor girders. DFPA developed 2.4.1.

Structural Panel Does Double Duty

• Douglas Fir Plywood Association has announced a new structural panel called 2.4.1 engineered to function as a solid one-piece base over supports on 48-inch centers for everything from thin vinyl tile to oak strip flooring.

The product is the result of two years of development involving intensive engineering research and field experience with builders. One contractor using a framing scheme specifically designed to utilize all the advantages of this method estimates that his total savings top $500 a unit.

Advantages in time, cost and quality of floor:

• Crews handle fewer pieces and framing goes in faster.
• A stiffer floor with a substantial feeling under heavy traffic depending upon framing used.
• When girders are framed into foundations, decrease in height of walls a foot or more with all contingent savings in time and materials this implies.
• Since walls can be carried directly on foundations, elimination of all troubles that stem from shrinking joists in conventional construction.
• Panels can be tacked into place and subsequently picked up by electrical and plumbing subs to get at the work.
• Wall-to-wall carpeting as well as resilient flooring can be laid directly on subfloor.

The new panel is unsanded 1⅛-inch seven-ply panel manufactured under the association's quality supervision program with Interior type mold-resistant glue line conforming to the U.S. Commercial Standard. The face is made up of C-repaired veneer. This means it has no open defects larger than ¼-inch by ½-inch.

Douglas Fir Plywood Association recommends an adaptation of the framing scheme worked out by the man who originally conceived the idea, Kenneth Larsen, president of Continental Homes, Inc., Seattle, Wash.

G-P Makes New Panels

• Two new interior wall panels, made in V-grooved, random widths from birch and red gum woods and completely refinished ready to install, now are available in the retail market, by Georgia-Pacific Plywood Co.

Georgia-Pacific V-grooved birch and V-grooved red gum paneling offer many exclusive features. Prefinished and waxed, the panels are ready for installation and immediate use. The quarter inch thick hardwood is especially processed to accentuate the beauty of the natural grain.

The new birch and red gum plywood panels are V-grooved on the veneer joints in the much wanted random widths. Edges are eased for continuous plank effect. Panels are back sealed for stability, and are packaged ten panels to a carton for protection. They are available in 4 x 8 foot and 4 x 7 foot size panels, which can be installed quickly and easily, either by professional workmen or by do-it-yourself home owners.

• **HULT LUMBER CO.** is constructing a new veneer plant at Horton, Ore. The plant is expected to be ready for operation about July 1.

New Ply Corp. Scheduled

• Carolina Pacific Plywood, Inc., a new corporation, has been formed by a group of Portland, Ore., and North Carolina businessmen. Buford D. Mitchell, Mitchell Bros. Truck Lines, Portland, is president; John Colluci, Jr., Colluci & Assoc., Wilmington, N. C., is vice president. Secretary-treasurer is Lawrence Sprunt; directors are Kenneth Sprunt and Horace Corbett, all of Wilmington.

The new corporation purchased the 3 million sq. ft. per month-capacity Empire Plywood Co., Medford, Ore. and a substantial interest in Oregon Coast Veneer Co., Brookings, Ore. Facilities for sanding the entire output of the Empire mill will be installed.

• **A MILLION DOLLAR TIMBER** purchase was announced in May by the Coquille Plywood Division of Textron American, Inc. The firm bought the timber in the Johnson Mt. area near Powers, for use in its newly acquired Myrtle Point, Ore. veneer plant. The company also announced plans for a $250,000 modernization program at the plant to more than double its capacity. The timber was purchased at a bid of $39.10 per M.

Fir Plywood Information Office Opens in London

• The first technical information office of the fir plywood industry in the United Kingdom has been opened in London by the plywood manufacturing companies of British Columbia. Mr. A. C. Kenny, professional engineer of Vancouver, has been engaged by the Plywood Manufacturers' Assoc. of B. C. to act as U. K. technical and information representative.

The office is located in the office of the Canadian Commercial Counsellor (Timber). Kenny's appointment has no direct connection with sales; his main duties will be concerned with the provision of fir plywood technical literature and information to the building and construction trades and other users.

• **NEW ADHESIVES PLANTS** close to centers of plywood production are being built by the Borden Co. Chemical Division. A plant at Kent, Wash., to produce 36,000,000 lbs. of formaldehyde was started earlier this year. The newest plant will be a formaldehyde and synthetic resin facility at Fayetteville, N. C. It has a capacity similar to that of the Kent plant.

Plywood Department

Porcelain Plywood Product Now Marketed by U.S. Ply

• United States Plywood Corp. has introduced a new porcelain-faced plywood panel, designed for various industrial and home uses, exterior and interior.

Store and theatre fronts, gas stations, column coverings, wainscoting, shelving, lining of shower stalls, kitchen and bathroom walls are samplings of the many uses to which "Porc-Lin-Ply" can be adapted.

Panels come in sizes 36 by 96" and 5/16" thick. Colors are standardized, with nine shades being included in the line.

Porc-Lin-Ply has a 30 gauge, .012 inch steel "face" treated with two coats of porcelain fused under a 1600 degree heat, to achieve a hard, semi-matte finish. Core is ¼" exterior grade plywood. A metal backing gives balance to the panel which weighs 1.75 pounds per square foot.

• **IT'S GEORGIA-PACIFIC** Corporation now. Last month the company Georgia-Pacific Plywood Co. dropped the word plywood because of diversification in lumber, pulp and other products besides just plywood.

THE DIE IS CAST!

IT'S THE DIE-CAST ALUMINUM HOUSING FOR THE NEW TULSA® SINGLE SPEED, MEDIUM DUTY POWER TAKE-OFF!

The die-cast aluminum housing makes this NEW TULSA power take-off "light as a feather" . . . gives it all the strength and durability for which the TULSA line is famous. Output shaft rotates on two needle bearings and is manufactured in three sizes—13/16", 7/8" and 15/16". It's available with either cable or lever control. Designed and built to cover the full market range of a thoroughly dependable, low priced, single speed power take-off for medium duty work. Same nationwide distribution and service as offered for the full TULSA line of power take-offs.

Tulsa Winch
TULSA, OKLAHOMA DIVISION OF VICKERS Inc.

Oregon Company Plans New Green Veneer Plant

• Stimson Lumber Co. will enlarge its forest products production center at Forest Grove, Ore., by adding a green veneer plant, according to Pres. Harold A. Miller. In announcing the firm's entry into this new product line he said the addition will have capacity for turning out 90 million square feet of ⅛ in. green veneer per year on one-shift schedule, and that it "will result in completely integrated operation."
facilities get into production, logs will

Late this year when the complete facilities get into production, logs will be debarked and then routed to the veneer or lumber plant for best utilization. Leftovers and trims from these operations are to be made into hardboard by Forest Fiber Products Co., subsidiary of Stimson Lumber, and wood flour is to be used by the wood plastic division for making Plasto-fil and Fil-tite. A splitter will be used to convert broken log ends and "pond lilies" into sizes suitable for chipping and thus used in the manufacture of hardboard.

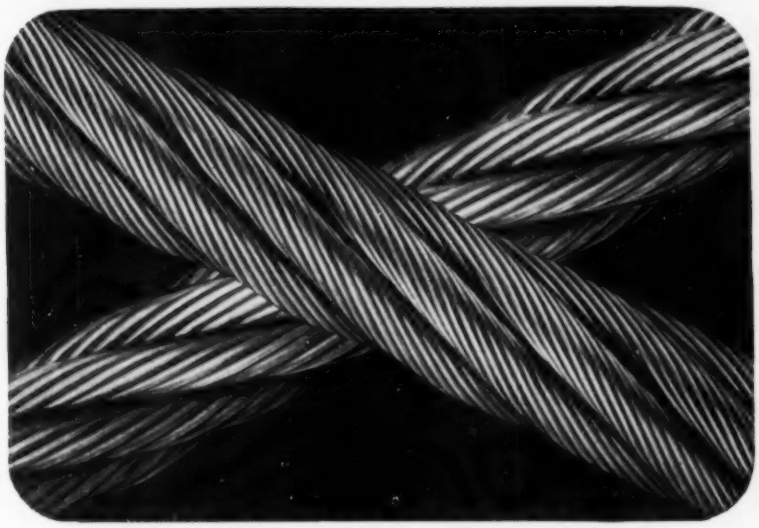
The expansion, to cost around $400,000, is to include a 72 in. Nicholson barker, and Coe lathe and chippers. The resultant integration will effect such complete wood utilization that other sources will have to be found for fuel, according to Miller.

• **DONALD G. JONES HAS JOINED** Hampton Lumber Sales Co., Portland, to take charge of a newly formed plywood and veneer division. Veneer sales handled by the firm include dry and green 4 foot pre-cut core stock in pine and fir from Redding, Calif. and fir 8 foot veneers from Siskiyou Plywood Co., south of Scotia. A new 8 section 5 line Moore dryer now being installed at the Siskiyou plant will inaugurate the sales of dry fir 8 foot veneer about June 1st. Jones will headquarter in Portland at the firm's general offices.

• **CROWN ZELLERBACH CORP.'s** new green veneer plywood mill in St. Helens, Ore., started operation in late May with a crew of 39 men put to work, with plans for another 39 to be added after six weeks.

• Sheathing grade plywood will be the product of a new plant being built at Kelowna, B.C., by S. M. Simpson, Ltd., largest lumber manufacturing organization in the Okanagan valley. Construction was started in May, according to General Manager H. B. Simpson, and it is expected that within seven or eight months the plant will be ready to turn out between 160,000 and 200,000 feet of sheathing plywood 3-8 inch basis daily. Equipment will include a standard 8 foot lathe and core lathe together with conventional plywood equipment details of which have not yet been determined.

FIRST WE DEVELOPED 1105 ROPE WIRE.



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Royal Blue

WIRE 1105 ROPE

1105 takes Royal Blue out of the ordinary wire rope class.

1105 is a rope wire that's new—that's stronger. It's the biggest news in many years.

1105 is the result of more than a century of research and development—it's the wire that gives Roebling Royal Blue the stamina that pays off in service.

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NEW OFFICERS, Northern California Section, Forest Products Research Society, from left: DR. FRED DICKINSON, trustee; DR. ARTHUR ANDERSON, trustee; THOMAS SHELTON, vice-chairman; ROBERT KUHN, secretary-treasurer; H. N. STEPHENSON, chairman. Far right: banquet speaker Dean HENRY J. VAUX, University of California, School of Forestry.

PROGRAM participants: O. J. BUGGE, Willard B. Young Co.; R. D. ROSEBERRY, The Diamond Match Co.; ALBERT NODELL, Morse Laboratories; JOSEPH DEFINO, Hammond Lbr. Co.

Expansion Gains Are Cited by F. P. R. S.

• "Probably almost a fifth of the 2 million people who have come to northern California since 1945 have been absorbed into the economy either directly or indirectly as a result of the expansion of forest industry activity," Dean Henry J. Vaux, School of Forestry, University of California, told the annual meeting of the Northern California Section, Forest Products Research Society in San Francisco in April.

"Can the forest industries create as many new jobs in the next decades as they did in the last one?" To meet this challenge—to enable our forest resources to sustain further substantial increases in the size of the economic pyramid which they support—requires work along three lines. One is the development of new products and techniques using classes of material now considered as residues. A second is the development of lower costs of production through improved methods of manufactureu, in the case of products and processes already in use or already know. The third is the development of the expanded market without which technical and cost advances will be abortive.", said Dean Vaux.

The meeting was presided over by E. P. Ivory, Ivory Pine Co., Dinuba, chairman, and H. N. Stephenson, Sacramento Box & Lumber Co., Sacramento, program chairman.

Albert Nobell, research promotion director, Morse Laboratories, Sacramento, pointed out that the industry has under its control the source of utilizable residue materials from which important valuable chemicals can be derived. He said that the plywood division of the industry purchases large amounts of chemicals in the form of phenolic glue from resin companies whose present source of raw materials stems entirely from outside the forest industry.

"A satisfactory ligno-cellulose modified plywood glue could substantially increase profits in the manufacture of plywood, especially if the industry produced its own glue. "A research program as outlined should not be too costly because of the considerable background investigation already accomplished and reported in the literature.

"The forest products industry needs to increase its research spending in order to put its surplus lignin and cellulose to work in the most profitable markets."

Joseph J. DeFino, Hammond Lumber Co., Samoa, told of how his company six years ago decided to experiment on edge and end gluing to reduce mill waste by salvaging short pieces of lumber. The process was illustrated by colored slides. (See THE LUMBERMAN, Nov., 1954.) DeFino told the group that his department now has its own dry kiln, and they can see more of this glued up stock than they can manufacture.

O. J. Bugge, chief engineer, Willard B. Young Co., Sumner, Wash., spoke on "The Grading of Green, Rotary Cut Douglas Fir and Other Western Softwood Veneers". He told of a definite need for adequate green veneer grading classifications. (See THE LUMBERMAN Forest Industries Yearbook, March 25, 1956 for complete details on these proposed rules.)

R. D. Roseberry, chief forester, The Diamond Match Co., California Operations, told of an experiment concerning logs that had been left in the woods due to rot, shake, crook and merchantability both for size and value, and for trees that should be removed from the timber stand but are not marked for cutting due to poor form, low quality, excessive rot, or size limitations. Also any trees that might have been missed by the timber markers and loggers, as well as trees that died as a result of logging.

The area picked contained approximately 60 acres and produced a net volume of 2,028 MBM Scribner decimal C log rule in the original logging. The area was logged in 1954 and re-logged in 1955. The re-log for the area gave the company a net volume, Scribner decimal C log scale of 346,060 board feet or 17% of the original cut volume.

"The results of this re-log experiment definitely indicated to us the necessity of seriously considering this type of operation in the future. Even though we only carried the experiment through to the green chain with the use of both woods and mill equipment built for large timber we have a good idea of volume and value of forest products involved in this type of operation. Due to the type of equipment we used our costs are not indicative of such an operation employing the proper type of equipment and were not included in the report," said Roseberry.

He pointed out other advantages:

- protection of the reserve timber;
- reduction of the fire hazard;
- decreased infection centers for disease and brooding grounds for destructive insects;
- increased annual net growth;
- increased efficiency of logging by having the large sides handle the larger timber leaving the smaller material for a re-log side.

Elected chairman of the section was H. N. Stephenson, Sacramento Box & Lumber Co.; Tom Shelton, Diamond Match Co., Chico, vice-chairman; Bob Kuhn, Rees Blow Pipe Mfg. Co., Berkeley, secretary-treasurer; Dr. Fred Dickinson, and Dr. Arthur Anderson, University of California, Berkeley, trustees.

Hawkeye Foresters Set Camp

• The Iowa State College Forestry Department will hold annual summer camp for 50 undergraduates on the Deschutes National Forest 40 miles west of Bend, Ore. Classwork will begin June 18 and will close Aug. 18. An Alumni Day will be held July 15, to which all ISC forestry graduates are invited.

In charge of the camp this year will be Dr. James Yoho, assisted by Dr. A. L. McComb, George Thompson and Leonard Kellogg.

The camp moves periodically to new locations. It was held on Jack Creek last year, and in other recent years has been held in Wyoming and Wisconsin.

Adjustable to All Conditions . . .

Mereen-Johnson VERTICAL BAND RESAW

- Individual feed motor drive
- Double supporting column — no overhanging wheels
- 100% anti-friction bearings throughout

Mereen-Johnson Resaws have special features that make for production economies and low maintenance costs. Eight feed rolls hold the stock rigid and eliminate "stock wobble". Variable feed drive — tilts for bevel siding. V-belt drive, 1200 RPM motor.

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Two Coast States Hold "JLC"

"JLC" STANDS FOR Junior Logging Congress. It's a new approach to conservation and forestry education but one which will undoubtedly become more popular in the future. So far, two states have inaugurated JLC. This spring, California's Redwood Region held its fourth annual congress, while the Washington state JLC convened for its second time.

Highlights of these two coast meetings are carried below.

The main difference between JLC and the Pacific Logging Congress and the various regional conferences is that the students leave the cities and towns to go into the woods for several days, instead of leaving the woods to meet in the city. Many of the subjects covered are the same at both meetings.

The JLC idea is, briefly, to get high school students who are interested in forestry and the forest industry out into the field where, under expert guidance, they can observe and learn the actual work carried on by foresters, loggers, millmen and others. State and federal agencies, private industry and the schools plus other interested individuals and organizations join hands to put on a valuable training program stretching over a period of several days.

Both professional and practical aspects of forestry and woods work are stressed. To boys unable to go on to college, it is pointed out that their future is not necessarily limited because they lack a forestry degree. However, the specialized training given by forestry schools is emphasized as an advantage in climbing the ladder toward top jobs in today's more highly technical forestry enterprises.

The JLC program requires detailed advance planning and cooperation between public and private organizations. But the pay-off will come in a greater reservoir of youth ready to make a career for themselves in the woods and mills in future years. Because forest industries are in direct competition with many other highly publicized and glamorous industries JLC is a positive educational program that stands to expand and grow in the years ahead.

Redwood Region JLC Featured Mill, Camp Tours

• A king-size redwood logging show on Jackson State Forest near Fort Bragg, California, was one of the highlights of the fourth annual Junior Logging Conference sponsored by the Redwood Region Conservation Council at Mendocino Woodlands camp. The pioneer youth education project brought 90 high school forestry, logging, and lumbering students together for an intensive program of field trips, mill tours, and lectures on April 29 to May 2.

One entire day of the conference was taken up with a field trip to a Pacific Coast Co. logging show on Jackson State Forest. Also included in the field trip were a talk on Union Lumber Co. Tree Farm policies, a demonstration of a thinning plot on Jackson State Forest maintained by the California Division of Forestry, a lecture on the peculiar pigmy forest near Fort Bragg, and a visit to the Division of Forestry pole treating plant and state nursery near Fort Bragg. Cecil Judah of Berglund Tractor & Equipment Co., Napa, discussed maintenance of logging tractors during a phase of the field trip.

Another half day was spent on a tour of Union Lumber Co. Fort Bragg mill operations. A tour of the company logging museum was also conducted.

A profitable half day was spent in camp with demonstrations of proper forest seeding and planting techniques, demonstration of mobile fire fighting equipment by the Mendocino County State Division of Forestry organization, a discussion of forest soil properties, and a vsit to a 1926 tree planting site.

Evening programs included talks by Kenneth Smith, vice-president of The Pacific Lumber Co., San Francisco; Mrs. Mary Lea Griggs of Tacoma, Wash.; Robert Maclean of the California Division of Forestry, Santa Rosa; Don Lewis of U. S. Forest Service, San Francisco, and Dr. Fred Dickinson, director of the University of California forest products laboratory. Students heard welcoming remarks from J. Harold Robinson of Willits, Redwood Region Conservation Council president, and John P. Sweeley of Ukiah, conference chairman.

Emanuel Fritz, secretary-manager of the Redwood Region Logging Conference, made awards to four outstanding students attending: Henry Moore of Eureka, Arthur Jorgenson of Fortuna, Sam Bishop of Arcata, and Joe Mayfield of Ukiah High School. All were invited to attend the Redwood Region Logging Conference at Ukiah, California, May 25 and 26.

ROBERT GRUNDMAN, forester, Union Lbr. Co., Fort Bragg, Calif., explains tree farm policies to students attending Redwood Region Junior Logging Conference (left photo). In right photo, EMANUEL FRITZ (L.) and JOHN P. SWEELEY (R.) congratulate outstanding students. From left: HENRY MOORE, ARTHUR JORGENSON, SAM BISHOP and JOE MAYFIELD.

120 Students Attended JLC at Pack Forest

• The Junior Logging Congress in Washington was expanded this year to take care of 120 high school students from all over the state. They met for three nights and two days at Pack Forest, 40 miles southeast of Tacoma.

Forestry leaders from western Washington composed the "faculty" of this second annual congress. A number of the students came from the several high schools which have accredited forestry courses. Observers were on hand from West Coast Lumbermen's and California Redwood Associations and from numerous schools within the state which are interested in developing education programs.

The Weyerhaeuser Timber Co.'s Vail-McDonald Tree Farm hosted the group for a half-day tour of logging and forestry activities. The students were spectators on a high-lead logging show in the rugged country just west of Mt. Rainier National Park. Timber falling and topping a spar tree were demonstrated. Loading and re-loading of logs and a new company nursery were also observed. Jim Church, branch forester, led the tour.

LEAD-OFF SPEAKER at the first evening meeting was E. G. Griggs II, president of St. Paul & Tacoma Lumber Co., who covered the topic, "What the Forest Industries Expect from Young People." Other evening sessions were devoted to lectures and discussions on the employment opportunities in the private lumber and logging companies and in various public forestry and conservation agencies. Representatives from each group were on hand to describe work and answer questions.

Group discussions on forestry and logging were conducted by William Tinney, forester for the Industrial Forestry Association; Len Flower, U.S. Forest Service; and Royce Cornelius, forester, Weyerhaeuser Timber Co. What happens to the log after it gets to the mill, was described by Professors Ben Bryant and Harvey Erickson of the forest products department of the U. of Wash. College of Forestry.

The group also toured Pack Forest on foot, observing forest land in all stages of growth with Dean Gordon Marckworth of the College of Forestry and his staff.

The JLC was planned and coordinated by the Keep Washington Green organization under Mike Lazara, director; KWG youth director Don Flora was general chairman.

• The S. J. Hathcock and Son Lumber Co. of Lebanon, Tenn., one of the city's largest builder-supply firms, has been sold to Jack Roberts, owner of the Roberts Coal Co. at Lebanon. Company will now operate as the Hatchock Lumber Co.

Concave sides make V-belts last longer

The sides of every Gates V-belt (Fig. 1) are concave—a precisely engineered curve that greatly increases V-belt life. Here's why:

On the bend around the sheave, the concave sides of a Gates V-belt fill out and become straight (Fig. 1-A). Thus the belt makes full contact with the sides of the sheave, grips the sheave evenly, and wear is distributed evenly across the sides of the belt. Uniform wear lengthens belt life; keeps costs down.

Make this simple test

Take a straight-sided belt (Fig. 2) and bend it. Feel the sides at the bend; they bulge out. Now picture this bulge in the sheave groove (Fig. 2-A). It is easy to see that the belt makes uneven contact at points indicated by arrows. Naturally, wear is greater at these points. Uneven wear shortens belt life; increases belt costs.

Cut down-time and V-belt replacement costs. Specify belts that grip evenly and wear longer . . . specify Gates Vulco Rope—the V-belt with concave sides. There is a Gates distributor nearby who will quickly supply the belts you need. The Gates Rubber Co., Denver, Colorado

—World's Largest Maker of V-Belts

TPA 56

Gates VULCO ROPE Drives

WILLIAMS-WHITE HOT or COLD

Laboratory to Production PRESSES

If your company is expanding or if you are "new comers" in the plywood, veneer or hardboard field, consider WILLIAMS-WHITE & CO. custom built hot or cold presses before you buy! Built to your exact requirements, WILLIAMS-WHITE presses represent the peak of up-to-date design and craftsmanship.

Your specifications as to capacity, plate size, number of openings, types of controls, etc., are built into each WILLIAMS-WHITE hot or cold press. They are available in column or A-frame construction, with steam, fluid or electrically heated plates.

Above is a typical WILLIAMS-WHITE laboratory press, of 90 tons capacity, plate size 38" x 24" and daylight opening 12 inches.

At right is a WILLIAMS-WHITE cold press of 575 tons capacity, with plate size 106" x 54" and adjustable daylight opening, 80 to 123 inches.

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THEY'LL GUIDE plywood distributors for the coming year. (L to r): ALBERT HERSH, first vice pres.; EARL G. THURESSON, new president; and CAREY WATKINS, second vice president.

Plywood Distributors Award Charles Devlin High Industry Honor

• **THE EVER-POPULAR** theme of cost reduction was headliner at the National Plywood Distributors Association 14th annual convention, held at The Broadmoor at Colorado Springs, Colo., May 15-18. Three hundred jobbers, ladies and guests attended.

Speakers emphasized the need of improved salesmanship, merchandising, informative records, rapid accounting and operating economies.

Retiring President L. E. Hall, Lumber Products Co., Portland, Ore., turned the gavel over to new head of the association, Earl G. Thuresson, Associated Door and Plywood Co., Chicago. Albert Hersh, Industrial Plywood Co., Inc., Jamaica, L. I., N. Y., moved up to first vice president, and Carey A. Watkins, Gulf States Plywood Co., Jacksonville, Fla., was elected second vice president.

An outstanding feature at the annual banquet of the association meeting was the ceremony of presentation of the industry's highest honor award to Charles E. Devlin, Managing Director of Chicago, Illinois.

This award for outstanding contribution to plywood is in the form of a great plywood and bronze pylon, designed by J. Stedman Wood, nationally known artist-designer. Devlin's name was added to those other great recognized by the industry. The pylon is to be installed and permanently maintained in the Hall of Forestry, Portland, Oregon.

OTHER NAMES ON the Scroll of Honor are Lawrence Ottinger, Don L. Davis, Sr., and W. E. Difford.

Ottinger, Davis and Difford were selected for the Scroll in 1955 as the first three industry leaders to be so honored. Lawrence Ottinger was founder of United States Plywood Corporation. Davis is Chairman of Aetna Plywood and Veneer Company of Chicago. Difford is Managing Director of Douglas Fir Plywood Association, industry trade promotion organization with headquarters in Tacoma, Washington.

Each succeeding year names will be nominated for the Scroll of Honor from all segments of the industry. The name finally chosen will be engraved on the brass plaque with a parchment scroll presented for his office.

HIGHEST AWARD of distributors' group is Plywood Scroll of Honor, awarded to CHARLES E. DEVLIN.

On a panel session devoted to possibilities for expanding sales, W. E. Difford, managing director, Douglas Fir Plywood Association, advised jobbers that sales management "would be one of the biggest things in your lives", during the next two or three years. He said "If I were a jobber I would learn everything about training salesmen". In his candid discussion he pointed out weaknesses, as well as merits, of current selling methods used in plywood distribution.

Stewart W. White of Georgia Pacific, Olympia, Wash., outlined important and specific methods of selection of sales personnel and emphasized the importance of creative selling. White said "The Creative Sales Approach offers greatest opportunity for success in the future". He said "this type of selling makes it possible for industries to grow and to maintain leadership in their field". He added "The salesmen actually learn by doing and more often than not are amazed at the response and results they get from extra effort in the creative selling approach".

AMONG OTHER TOPICS discussed were (1) the desirability of standardization of hardwood plywood grades and nomenclature; (2) the factors involved in changing fir plywood production 100% to an Exterior glueline; (3) desirability of a mutual program to reduce damage in transit; (4) jobber advocacy of steel strapping plywood into bundles to lower damage and increase ease of handling in and out of warehouses; (5) jobber feeling that quality has been slipping, perhaps unavoidably, due to raw material supply available but that closer "appearance" grading seems to have become necessary; (6) quality problem is opening up some markets to substitutes and competing materials; (7) jobbers point out continuing need for sizes other than 4x8, particularly the shorter lengths and narrower widths; (8) discussion of importance of buying as compared with sales and merchandising in building a successful warehouse business; (9) serious lack of communication within organizations as well as with customers and suppliers pointed out as the major problem to be corrected by meetings and conventions and by improved workings of intra-and inter-industry committees.

The following new directors were elected: Fred Smales, U.S. Plywood Corp., Los Angeles; John Goetz, Atlas Plywood Corp., Trenton, N. J.; Theodore Merrill, Interstate Lumbermen's Supply Co., Newark, N. J.; Jack K. Fiddes, Fiddes-Moore & Co., Franklin Park, Ill.; Ben Johnson, Gulf States Plywood Co., New Orleans, La.; Dean Trumbo, M. Trumbo, Inc., Portland, Oregon.

Hold over directors are: Jay Wallenstrom, Roddis Plywood Corp., Marshfield, Wis.; Wm. Gouline, Central Building Supply Co., Baltimoree; James Standard, Connecticut Plywood Corp., West Hartford, Conn.; John P. Ashton, Ashton Wholesale Service Co., Des Moines; Larry S. Clark, Twin City Hardwood Lumber Co., St. Paul, Minn.; Roland Remme, Southland Building Products Co., Little Rock, Ark.; W. W. Logan, Jr., Logan Lumber Co., Tampa, Fla.; Wm. Fahs, California Panel & Veneer Co., Los Angeles; and Kenneth J. Shipp, California Builders Supply Co., Oakland. George L. Waetjen, Milwaukee Plywood, Milwaukee, Wis., was re-elected a director, representing Past President's Council.

W. F. (Bill) STEWART

T. S. PORTER

T. A. HUETTER, Jr.

ROBERT S. BRINTON

Bill Stewart Promoted to New Post by Pack River

• Promotions for four staff members of Pack River Tree Farm Products, Spokane, Washington, have been announced by J. M. Brown, Jr., and L. V. Brown, owners. They resulted from division of the firm's activities into two separate organizations for lumber sales and by-products sales. The latter will include sales of the new Tenex waferboard now being manufactured at Sandpoint, Idaho.

W. F. (Bill) Stewart was named to the newly-created post of general sales manager to head the entire organization, and T. S. Porter was appointed to the new post of assistant general sales manager.

T. A. Huetter, Jr., becomes sales manager of the lumber sales division and Robert S. Brinton assistant sales manager.

Cooperative Fire Training School Held

A new wrinkle in forest fire suppression was introduced in Southern Oregon recently when a cooperative fire training school for sawmill foremen was held at the State board of forestry headquarters near Central Point. Pictured above are Brit Ash, district ranger, Butte Falls, with nozzle, Frank Simmons, Butte Falls forest warden, center, and Doyle Stockton, Oregon State board of forestry, instructor. They're demonstrating the effectiveness of varying sprays to the foremen-students. The two day program was a joint effort of the Southern Oregon Conservation and Tree Farm association, Oregon State Board of Forestry, Bureau of Land Management and U. S. Forest Service. Over 100 foremen from 40 sawmills in the Medford area attended the sessions. According to L. L. "Doc" Simpson, secretary of SOCTFA, the aim of the school was to provide a nucleus of trained firefighters from Medford mills to combat any future fire outbreaks. (American Forest Prod. Ind. photo)

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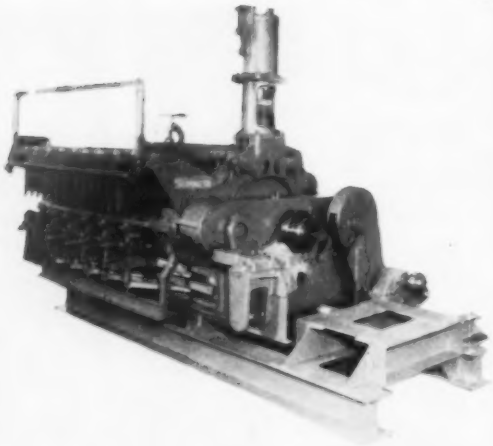
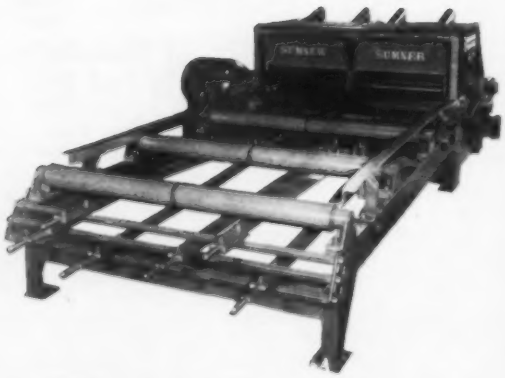
with a

SUMNER EDGER





SUMNER PACIFIC COAST TYPE EDGERS

. . . have "Top priority" for accuracy, rapid breakdown of cants and edging the regular mill run.

FULLY POWERED SHIFTERS motivated on a chain principle through cone clutches RESPOND INSTANTLY. The Saw-Shifter Levers provide the edgerman with finger tip control. Raising or lowering the levers moves the saws into position. Release of the levers locks saws at the assigned setting.

Press Rolls are mounted in anti-friction bearings and are raised by an air or steam cylinder.

SUMNER PINE TYPE EDGERS

. . . with Feed and Press Rolls for one man operation; or divided Feed and Press Rolls for two man operation.

Direct motor drive on saw arbor with feed roll directly motor driven through reduction drive, variable speed motor or from any variable source with roller chain drive between feed rolls.

Arbor, feed rolls and press rolls have anti-friction bearings throughout.

TO MEET CUSTOMER NEEDS

SUMNER EDGERS are available with either right or left hand direct motor drive . . . with hand or power shifters . . . 4", 6", 8", 10" and 12" openings.

Designers and Builders of Quality Machinery for the Forest Products Industries

ESTABLISHED 1892

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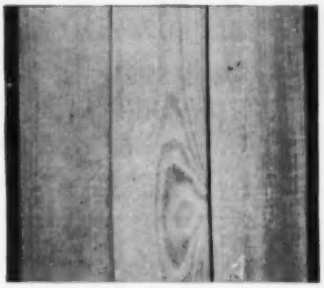
ALL INQUIRIES RECEIVE OUR IMMEDIATE ATTENTION

"WE GET LOW-COST INSURANCE AGAINST BLUE STAIN WITH DU PONT Lignasan®"

Mr. Bradenthaler reports, "Since we have used 'Lignasan' in our dip tank, blue stain has been no problem."

Untreated pine boards showing the effect of attack by blue-stain fungus.



Treated with "Lignasan," these boards remained clear and bright.

Says ANTHONY BRADENTHALER, Mgr.
Burnt River Lumber Co., Baker, Oregon

" **'Lignasan' fungicide** has proved satisfactory, and our least expensive insurance in producing quality lumber. We have used 'Lignasan' for many years to keep our pine lumber clear and bright. Since we've used 'Lignasan,' we have encountered no blue stain in freshly cut lumber."

"Lignasan" prevents blue-stain attack

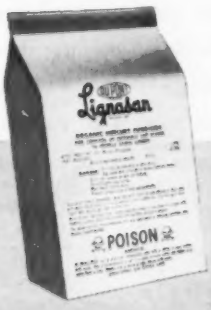
"Lignasan" fungicide keeps either hardwoods or softwoods clear and bright. It's concentrated, gives unusual effectiveness at low cost . . . now available in 2-lb. bags for handy unit measure.

"Melsan" controls stain and mold

Even under unfavorable drying conditions, Du Pont "Melsan" fungicide stops both stain-causing organisms—even in areas of high temperature and humidity. All-purpose "Melsan" costs only slightly more than "Lignasan."

* * *

Always compare treatment costs on the basis of cost per 1000 b.m.f. You'll see that Du Pont stain preventives are economical as well as efficient.



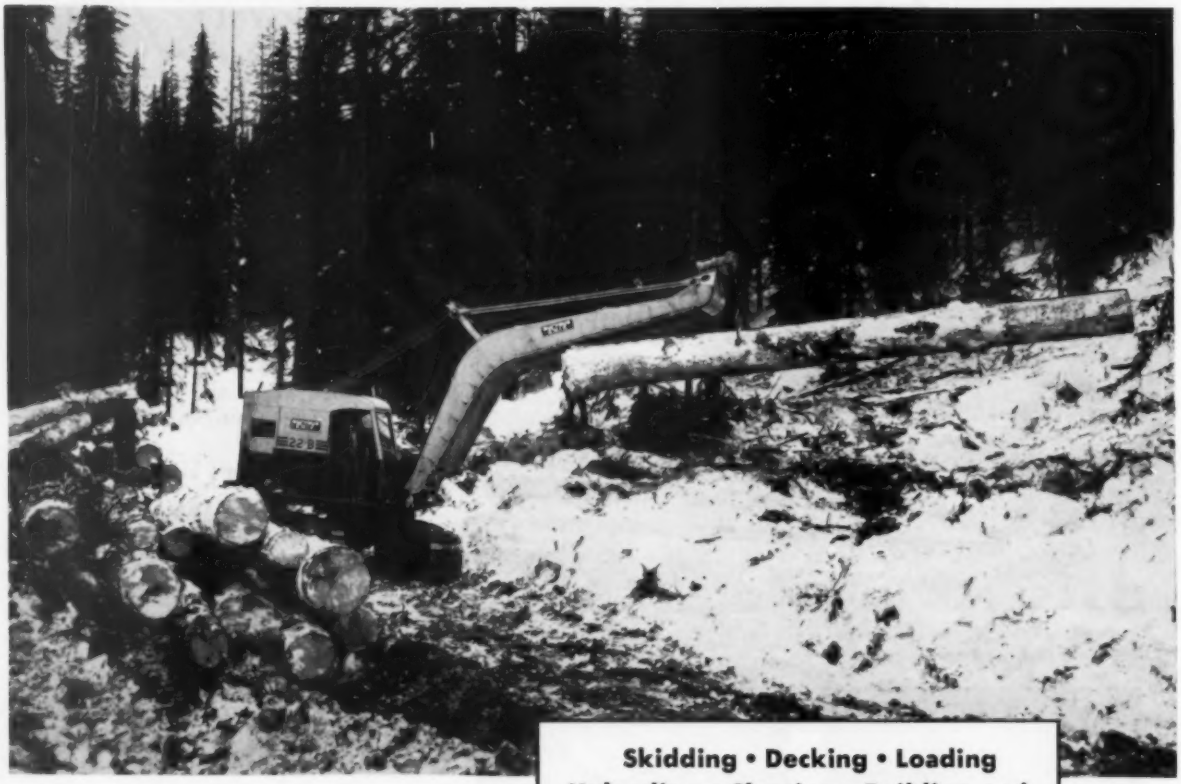
***NEW** 2-lb. package eliminates waste, simplifies mixing and measuring.*

DU PONT
REG. U.S. PAT. OFF.
BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY

Lignasan® and MELSAN®
For stain control *For stain and mold*

What a Boost in LOGGING PROFITS . . .

. . . when you can handle so many key jobs with one basic machine!



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Unloading • Clearing • Building and
Improving Haul Roads • Maintenance
Cleanup

WITH Bucyrus-Erie crane-excavators it's easy to cut costs and to make MORE money on your logging operations. Each model provides a *shovel* or *dragline* for building haul roads and for other earthmoving work; a *crane* (with standard or logging boom) for loading logs; or a *clamshell* for maintenance and clean-up work.

Bucyrus-Eries are built to stand up to a steady diet of tough timber duty. Rugged strength and durability are the result of Bucyrus-Erie's constant close attention to the little things . . . careful blending of skills right down the line. At Bucyrus-Erie, quality comes FIRST — in design, in materials, in manufacture, and in service.

Your nearby Bucyrus-Erie distributor will gladly help you with your loading and excavating problems. See him today for detailed information on these three favorite models of logging companies — the ¾-yd. 22-B, the 1½-yd. 38-B, and the 2-yd. 51-B. For rubber-tired mobility, ask him about the popular 22-B Transit Crane. 220E56

BUCYRUS ERIE South Milwaukee, Wisconsin

We're Embarrassed!

DID YOU SEE this recent news item?

"Salem, Oregon—Traffic accidents involving trucks increased in 1955, the State Traffic Safety Division reported. There were 8403 accidents involving trucks of all types. These mishaps injured 1431 persons and brought death to 67, an eight percent drop in fatalities from 1954.

Deaths in log truck accidents on public highways climbed from 12 in 1954 to 15 last year. Total log truck accidents increased from 615 to 685."

Chances are that some of the log truck accidents were due to faulty equipment and, more important, lack of proper training of drivers.

Recently we attended part of the Annual Motor Fleet Supervisor Training Course, held in Portland, Ore. It's a week-long hard-hitting, information-packed session lasting from early in the morning to late in the afternoon. The trainees, all fleet operators and drivers, really go to school.

Topics presented include: "Good Drivers—How To Pick Them"; "Records—A Guide to Lower Costs"; "Creating and Maintaining Driver Interest"; "Training—in Small Fleets and Large"; "Supervision—Organizing for Smooth Operation". Instructors are men who are doing the job, all competent experienced talent.

We observed that of all the trainees interested in better, safer driving, there was only one man representing the logging and forest products industry. And he came in the role of instructor! That makes the score for our industry Zero.

We've been told repeatedly that our log and lumber trucks are our principal public relations "vehicle". They make more contacts in a day with John Q. Citizen on the public highways than do any given number of speeches, published bulletins and newspaper articles. The man behind the wheel of that truck can be our most effective public relations officer. He can defame or glorify our industry, depending on how courteous he is, how safely he drives the rig, and in what condition he keeps it.

Yet many logging fleet operators on public highways will invest thousands of dollars in a new truck and trailer and practically nothing in the training of the man who chaperones that outfit on the highway. Some of the larger companies carry on their own in-company training schools and do a fine job, among them Crown Zellerbach Corporation, J. Neils Lumber Company and others, but most of the industry does little or nothing.

We quote from one authority, "The forest products industry is 20 years behind the other over-the-highway operators in carrying on driver training programs." Why doesn't the industry take stock of its shortcomings and undertake more driver training programs, particularly among the smaller fleet and sole operators?

How long can we afford to antagonize the public, whose favorable attitude reflected in legislative circles keeps us in business, with incompetent drivers piloting unsafe equipment or rolling stock whose mechanical operation they don't understand? Power brakes, power steering, cab over engine bodies, new transmissions—all pose problems for even the good driver "brought up" on older trucks. Let's do something about it—soon—through industry-wide effort.

FOREST DEVELOPMENT POLICY Association members, from left: R. J. KEELEY, Empire Mills; C. W. WALKER, Forest Counsel; J. F. JACOBSEN, Empire Mills; H. P. ELLIS, SAM HELLER and PAUL HELLER, Pacific Pine; R. S. MOORE, Moore-Whittington Lbr.; H. C. SWEATMAN, Sec-Mgr.; W. J. ALLISON, Allison Log.; A. B. BENDICKSON, Bendickson Log.; A. P. ALLISON and DOUG ALLISON, Allison Log.; P. J. KLOTZ, Eagle Lake Sawmills; V. HEATH and GEORGE WHITE, The Pas Lbr. Co.; R. M. HUNGERFORD, Clayburn Co.

Development Association Stresses Conservation

• Coming out strongly against the lumber operator who is in the business strictly for personal gain, B. J. Keeley, Empire Mills Ltd., and president of the recently formed Forest Development Policy Association, presented four major points in the Association's objectives at the group's first annual meeting held at Vancouver, B.C., recently. They were:

- Conservation of forests.
- Complete utilization of timber.
- Greater stability in employment within the industry.
- An adequate return for timber.

Keeley pointed out that more than 100 million board feet of usable leftovers were being lost annually in the Vancouver forest district. There are approximately 350 sawmills operating in the area. Of this number at least 300 are too small to justify installation of barking and chipping facilities necessary for the production of pulp chips from waste.

The Forest Development Policy Association is made up of 16 small and medium-sized logging and sawmill operators in B.C., and was formed last October.

OFFICERS OF DEVELOPMENT Association, from left: H. C. SWEATMAN, Sec.-Manager and R. J. KEELEY, Empire Mills, President.

"Adopt A Medical Plan"

(Continued from page 82)

R. G. LeTourneau of Longview, Texas, is shipping a new electically operated portable spar tree into Idaho. Also, one of the big electric wheel drive rubber-tired "trains" for log hauling is being built for Simpson Redwood Co. in northern California. He said first deliveries on the new electric log stacker are underway.

Elmer Critchfield described how he uses a Skagit SJ-8 for yarding, loading and quick changes for new shows (can change a set up as quickly as in 15 min.). Ferdinand Schmitz of Berger Engineering and Reid Priest and Hugh Hanna of Priest Logging & Equipment Co., Port Angeles, Wash., demonstrated setting up the Porta-Tower, with use of a battery-driven scale model. General discussions on the new D9 Caterpillar tractor and other equipment followed.

MORE INFORMATION on state forest lands was presented by Ted Goodyear, manager of the state Sustained Yield Forest No. 1 on the west side of the Olympic National Park. He said that under the planned 60-year rotation, the Forest should provide an average net yield of 42,000 bd. ft. per acre.

On the total 185,275 acres, there is nearly 5½ billion bd. ft. of timber worth approximately $72 million. Last year almost 93 million bd. ft. of timber was advertised for sale, representing a huge increase over the original sale of 10 million bd. ft. of fire-killed timber in 1951.

Goodyear said he will increase sales areas if loggers will agree to do some slash burning. He fears unburned slash as so great a hazard that he would prefer it be removed, even if it means a delay in reforestation. Current sales are offered in alternate 40-acre tracts. He stated that bids have been fairly high and above the appraised stumpage prices. Hemlock is running around $20/M and cedar $35/M.

Doctor Urges Industry-Wide Medical Plan

EDITOR'S NOTE: At the Olympic Logging Conference, Dr. R. E. Seth, M.D., Seattle, Wash., proposed that the logging industry consider a permanent large-scale medical program. Because his plan may have special significance to managers, safety engineers, personnel directors and others with a direct interest in industrial medicine and accident compensation and insurance, the following points have been excerpted from Dr. Seth's talk.

A sound medical program has two closely related basis goals: all aspects of health relate to occupation by means of:

- pre-placement and periodic medical examinations; prevention of disease and injury through medical supervision of workers, the work place, materials and processes; supervision of medical and surgical care to restore health and productive capacity as promptly as possible after occupational illness or injury; health education and counseling;
- reduction of compensation costs.

Set your goal as nothing less than the finest, complete health maintenance program possible to obtain.

The starting point is with the pre-placement or pre-employment examination. It is far better to spend $10.00 for the thorough examination of one man and skip the rest, than for the haphazard examination of five for the same $10.00. Management is in jeopardy when it employs a worker with medical clearance based on an inadequate examination and must then accept full responsibility for any aggravation of an undetected pre-existing condition.

The recommended medical examination should include: a careful medical history developed by the doctor; a thorough physical examination; urinalysis; chest X-ray; blood test (Kahn); visual acuity by means of a Sight-screener.

All workers who operate mobile equipment or dangerous machinery should also have psychophysical (reaction) tests.

Those whose duties involve heavy lifting, or who present a history of previous back injury or disability should have spine X-rays. This one procedure alone would ultimately eliminate most false back injury claims. The resulting compensation savings would more than pay all costs of this proposed medical program.

Lastly, special X-rays of deformities, arthritis, etc., and other necessary laboratory procedures for proper evaluation should be included as indicated.

The actual medical examination form should be standard so that the records would be of more value in the interchange of workers from one company to another. It should include concise medical recommendations, such as:

Class A — Approval for all work
B — Correct defects before approval
C — Approval for limited work only
D — Disapproval for all work

The progressive development of the complete program involves considerable study, planning, inspection trips, and conferences with management, Dept. of Labor & Industry officials, insurance underwriters, and labor leaders. Interested companies should select a Committee with authority to establish a Central Medical Dept. This Committee should have official designation and, perhaps, be set up legally as a non-profit organization on a pro-rata basis in much the same manner as labor-management relations groups.

The Committee would have two important alternatives to consider:

- The establishment of your own Central Medical Department under the direction of a salaried Medical Director.
- Utilization of an existing medical facility.

The next step would be an original and periodic examination of permanent employees. This should be started on a voluntary basis. After several years 85 to 90 percent of the workers are willing volunteers for this examination. Ultimately the routine becomes an accepted and appreciated procedure. Resistance wavers when executives and supervisors are included in the program.

Other functions of the Medical Department would include:

- Select participating examining physicians at other hiring points.
- Establish minimal, acceptable physical standards by job category.
- Instruct participating physicians.
- Review all medical examination reports and all other medical accident reports, and make recommendations utilizing specialist consultants. Reports of all compensable injuries and illnesses with time-loss and compensation paid, and reports of all non-occupational time-loss injuries and illnesses, should be made part of the permanent medical file.
- Assist attorneys in the preparation of Compensation Hearing and Court cases.
- Development of a uniform "Return to Work" examination procedure.
- Assembly necessary statistics for future reduction in compensation costs.

There are many other functions too numerous to mention

When the program is actually started, it is probable that the total cost of the Central Medical Office and including all medical examination fees, would not exceed one cent per employee-work-hour.

This challenge can be met but an industry as far-flung and complex as your needs a united, uniform medical program to accomplish results.

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• Whether you need "hot press phenolics," urea-formaldehyde or resorcinol resin adhesives, soybean or casein glues, Reichhold can supply you. *RCI has "the full line!"*

When it comes to delivery, you can count on Reichhold for *speed*, too! Widely located RCI plants and warehouses can fill all your needs for any of these adhesives without delay . . . by rail tank car or highway tank wagon.

And what about performance? It's excellent, for RCI control of adhesive quality extends to manufacturing its own basic raw materials such as phenol and formaldehyde.

When you have a technical problem, RCI's nationwide field service laboratories are ready to help you solve it . . . whether it involves a special glue for hot press, cold press, R/F, patching, splicing, utilizing wood waste or some completely new job.

Let Reichhold fill *all* your adhesive needs . . . technical information included!

Reichhold Seattle plant now also producing RCI Penta for wood preservatives!

Creative Chemistry . . .
Your Partner in Progress

RCI

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Synthetic Resins • Chemical Colors • Industrial Adhesives • Plasticizers
Phenol • Formaldehyde • Glycerine • Phthalic Anhydride
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REICHHOLD CHEMICALS, INC., RCI BUILDING, WHITE PLAINS, N. Y.

PENTA TREATMENT has been initiated by West Coast Wood Preserving Company at West Seattle and Eagle Harbor, Washington, plants. (Photo: Western Ways, Inc., Corvallis, Oregon.)

Wood Preserving Company Adds Penta to Facilities

• A major increase in the Northwest's supply of wood pressure-treated with pentachlorophenol is offered by West Coast Wood Preserving Co. with the initiation of penta pressure treatment at its West Seattle and Eagle Harbor, Wash., plants last summer.

Largest wood preserver on the Pacific Coast and one of the five largest in the country, the company operates 15 pressure treating cylinders at its two plants with a combined net charging capacity of almost 38,000 cubic feet, equivalent to slightly less than one-half million board feet. The company can turn out more than 20 freight car loads of pressure-treated lumber and other wood products daily with just one charge of its cylinders.

Pacific Coast Woods such as pine, fir, larch and hemlock, subject to damage from termites and decay, are given four times their ordinary service life with penta pressure treatment, according to Monsanto Chemical Co.'s Organic Chemicals Div., producer of West Coast Wood Preserving's penta.

Ralph F. Dreitzler, vice pres. and general manager of West Coast Wood Preserving, says the key factor in this expanding market is the increasing use of pressure-treated lumber in home building and on the farm.

At the same time, penta is coming into wider use for pressure treating poles and crossarms in the power and communications industries. Since 1950, there has been a five-fold increase in the use of penta for pressure treating poles, and penta is the preservative being used for almost half of the crossarms currently being treated with preservatives.

MATER RIDERLESS headblocks and knees, with Sel Set 10-button remote control setworks, installed at Potlatch Forests, Inc., mill located at Potlatch, Idaho.

Potlatch Forests Installs Riderless Carriage

• Potlatch Forests, Inc., Potlatch, Idaho, has been tackling the problem of reducing operating costs by a continuing program of modernization and mechanization. Potlatch cuts about 210,000 bd. ft. a day on its three Filer and Stowell 8 foot band headrigs with shotgun feeds. The latest step in Potlatch's modernization is the changeover to a riderless carriage on its No. 2 rig, a high speed double cut bandmill which cuts cants and small logs for grade, producing mostly 4/4 Pine. All headrigs receive logs from a common log haul.

For the riderless carriage M. E. "Bud" Jones, resident manager, chose a set of Mater Riderless Hi-Standard headblocks and knees with heavy duty headblocks, and a 10-Button Sel-Set Remote control setworks. The Mater blocks and knees were mounted on an all steel frame which had been used for several years. The 54" headblocks and knees are equipped with remote controlled fully oscillating, Mater non-defacing Tong Dogs.

The sliding tong dogs oscillate from approximately 5/8 inch to 4 5/8 inch from the face of the knee and dog down to a 4 inch cant and up to a 30 inch face. This also permits sawing to a 4/4 backstand, a common sawing practice at Potlatch. A hook dog is mounted on the center knee for first cuts on larger logs.

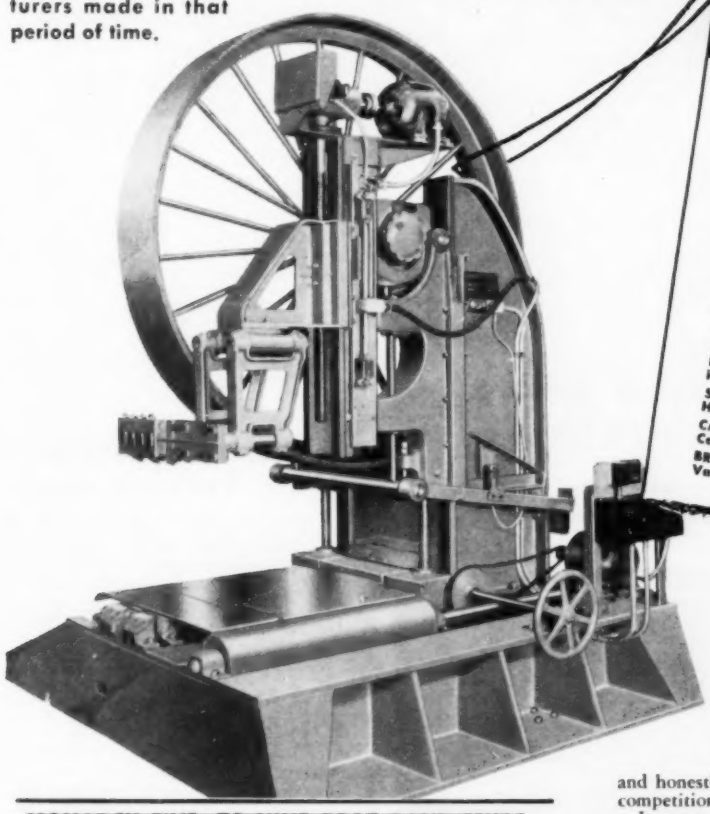
All three knees are equipped with 3-position air cylinder tapers and are fabricated steel structure with Mater "sandwich gib" construction for long wear. Mater remote control flippers are used; and a large drum type backstand dial is mounted on the carriage. A heavy duty Mater pantograph is used for bringing air and electrical circuits from the mill floor to the carriage.

The Sel-Set predetermining remote control setworks provides ten setting positions, and is powered by a 12 HP Eimco Air motor drive. The Sel-Set setworks installed at Potlatch contained the recently developed follow-up system which gives the greatest setworks accuracy and speed available. Forest Products Machinery, Inc. of Salem, Ore., handled the sale of the Sel Set Setworks and Mater equipment.

The conversion to remote control, including the installation of the new Mater headblocks and knees was made over a 3 day weekend. Potlatch operates 2 shifts a day and has not had a mill shutdown since 1948. Potlatch cuts pine, spruce, fir, tamarack, and some cedar. Logs are debarked hydraulically before entering the mill.

12 New Monarchs in 60 Days

That's about twice the sales most sawmill machinery manufacturers made in that period of time.



SOLD TO THESE SAWMILLS

	Band Mill Size
JOE DOBER LUMBER CO. Gales Creek, Oregon	6-Ft.
GOODYEAR NELSON HARDWOOD LUMBER CO., Sedro-Woolley, Wash.	6-Ft.
MONTANA IDAHO LUMBER CO Rexburg, Idaho	6-Ft.
MONTANA IDAHO LUMBER CO. Rexburg, Idaho	5-Ft.
HUMBOLDT FIR LUMBER CO. Hoopa, California	7-Ft.
MILLS LUMBER CO. Kemmer, Wyoming	7-Ft.
SHW LUMBER CO. Grants Pass, Oregon	7-Ft.
LINFOR LUMBER CO. Kellogg, Idaho	6-Ft.
HOME VALLEY LUMBER CO. Home Valley, Washington	6-Ft.
SISKIYOU MILLS Happy Camp, California	5-Ft.
CASCADE LOCKS LUMBER O. Cascade Locks, Oregon	8-Ft.
BRIDGE LUMBER CO. Vancouver, B. C.	5-Ft.

MONARCH FIVE- TO NINE-FOOT BAND MILLS

There is a Monarch band mill to fit your requirement! Your choice of 5, 6, 7, 8 or 9-ft. size is built from a standard production pattern, but expressly engineered for your special assignment.

- **Motorized, supersensitive, knife-edge straining device with limit switch insures the proper straining of saw.**
- **Rigid strength guaranteed by heavy steel fabricated column and base.**
- **Wheels are cast iron, carefully balanced.**
- **Bearings are SKF self-aligning. Spherical roller bearings are used on arbors.**
- **Adjustable steel bearing housings are arranged for quick, efficient alignment.**
- **Arbors are heavy, high-quality forged steel.**

How did your company buy its last piece of Sawmill Machinery?

Was it purchased after a critical examination of types available, measured against the manufacturer's prices?

We've done a lot of this type of selling lately, and honestly feel that all band mills placed against us in competition were good pieces of machinery.

In cases where we were contacted, we offer the following considerations as reasons *why* most mills bought Monarchs:

1. Many of our sales went as replacements for old Monarch band mills to companies who have increased their production and wanted a larger size.
- **A.** They were completely satisfied the first time.
- **B.** They found that a used Monarch band mill is a ready reseller.

2. Some of our sales replaced competitive equipment.
- **A.** In this case the owners found that at today's prices you can't beat a Monarch for speed, accuracy and ease of maintenance.

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Forge & Machine Works, Inc.

To: MONARCH FORGE & MACHINE WORKS, INC.
2130 N. W. York Street, Portland 10, Oregon
Gentlemen: Please send specifications on the band mill size I have indicated:
SIZE_____
We would also like to examine catalog literature on the following types of machinery:
LINE BAR RESAW_____ TRIMMERS_____ RESAWS_____
EDGERS_____ CARRIAGES_____ ANDRUS SET WORKS_____
AIR SET WORKS_____
Name_____
Address_____

OFFICERS, from left: L. R. PUGH, president; M. GALE BEALS, vice-president; A. J. AGATHER, treasurer; GEORGE J. TICHY, secretary-manager.

Timber Products Group Elects New Officers

• Re-elected to his second year term as president of the Timber Products Manufacturers Association at their 40th annual convention held in Missoula, Montana, April 18 and 19 was L. R. Pugh, president, St. Maries Lumber Co., St. Maries, Idaho.

Other officers are M. Gale Beals, Mount Emily Lumber Co., LaGrande, Ore., Vice-president; A. J. Agather, J. Neils Lumber Co., Libby, Mont., treasurer; George J. Tichy, Spokane, Wash., re-elected Secretary-Manager.

At the conclusion of a successful convention attended by over 150 members from Northeastern Oregon, Eastern Washington, Idaho and Montana the following were elected to serve with the above officers on the Board of Directors. They include:

Gerald White, Taber Mill Co., Hamilton, Mont.; H. H. Koessler, Intermountain Lumber Co., Missoula, Mont.; Harry G. Preston, Stoltze Land & Lumber Co., Columbia Falls, Mont.; L. V. Brown, Northwest Timber Co., Coeur d'Alene, Ida.; Leonard Luby, Kaniksu Forest Products, Inc., Priest River, Ida. and E. C. Olson Lumber Co., Spokane, Wash.;

J. H. Leuthold, Deer Park Pine Industry, Inc., Deer Park, Wash.; J. Harold Sampson, White Pine Sash Co., Spokane, Wash.; R. David Brown, Long Lake Lumber Co., Spokane, Wash.;

Alternate Directors include: H. F. Root, The Anaconda Company, Bonner, Mont.; Fred Broeder, Jr., Broeder Brothers Lumber Co., Creston, Mont.; Willis Thornton, Thornton Lumber Co., Missoula, Mont.; G. A. Miller, Kalispell Lumber Co., Kalispell, Mont.; J. J. O'Connell, Potlatch Forests, Inc., Lewiston, Ida.;

J. R. McFarland, L. D. McFarland Co., Sandpoint, Ida.; Joseph L. McCarthy, White Pine Lumber Co., Orofino, Ida.; Everett Kirkpatrick, Big Bend Timber Company, Grand Coulee, Wash.; Carl Schoenburg, Inland Fixture Company, Spokane, Wash.; Arnold K. Moss, Keystone Frame & Manufacturing Co., Spokane, Wash.; Marion Stillwell, Stilwell-Pengilly Lumber Co., Halfway, Ore.

Huss Buys Pulp Plant

• Huss Lumber Co., Chicago, Ill., large wholesaler of forest products, has organized the Huss Ontonagon Pulp & Paper Co., which has purchased the National Container Corp.'s pulp and paper mill at Ontonagon, Mich., together with about 30,000 acres of timberlands. The new company has announced plans for a $3,000,000 expansion program. The present plant will be converted from a kraft liner board cylinder mill to a neutral sulfite semi-chemical board mill. The company plans to intensively develop its tree farms.

Foresters Of Columbia River Section Meet

• The 1956 annual meeting of the Columbia River Section, Society of American Foresters, was held in Longview, Wash., on April 13 and 14, with the Longview Chapter as host. Theme of the meeting was "Forest Insects and Disease."

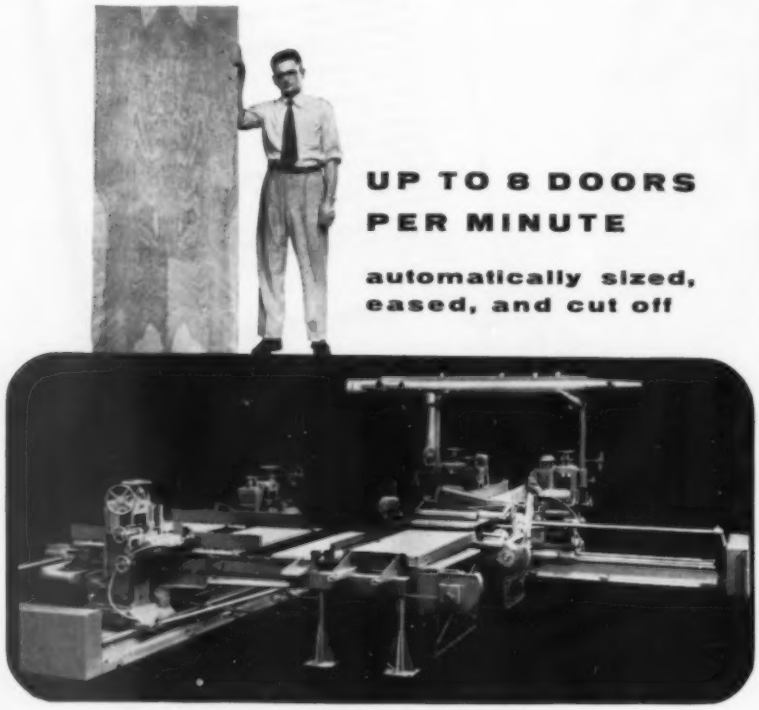
Pivot Arm Carriers Used

(Continued from page 95)

some change since its purchase, including adding a Klamath Iron fadeaway loader at terminus of the finish sorting chain. The general production plan now it to allow the grade obtained in the greatest volume, in any run, to remain on the sorting chain and thus be transported directly to loading unit. By foot-operated control switches the loaderman controls flow of lumber from sorting chain to the machine, moves the receiving tilting hoist up or down and controls offbearing rolls onto which completed packages are deposited by the loader. Some 60 to 85% of finished stock in the planing mill is handled by this machine.

Other planing mill facilities include a 24-in. Stetson-Ross planer, Albany automatic-selective undercut trimmer, Turner band resaw and a ripsaw.

Infeed rolls were installed at lumber stacker, planer and resaw, and at outfeed of the loader to make possible servicing of these units by the pivot-arm carriers.



UP TO 8 DOORS PER MINUTE

automatically sized, eased, and cut off

. . . using Greenlee No. 542 Door Machines equipped with an automatic transfer unit

V-chains and tracks on the GREENLEE No. 542 are machined of special nonmetallic material to eliminate lubrication and wear problems while assuring cutting accuracy. Top easing units float on guide rollers to automatically compensate for varying door thicknesses. Special chip removal system in transfer unit prevents marring of doors in the hopper or under the rollers.

With this GREENLEE assembly in your plant you can automatically size, ease, and cut off nearly 500 doors an hour! Doors are first fed into the GREENLEE No. 542, shown at right above, for sizing to width and easing edges. GREENLEE Transfer Equipment then automatically conveys the work to the adjacent GREENLEE No. 542 for cutting off to length . . . eliminates need for two men normally required at this handling point. End result is high-speed production *on a most accurate basis* to put your plant in an outstanding position for meeting today's highly competitive conditions. Write for details.

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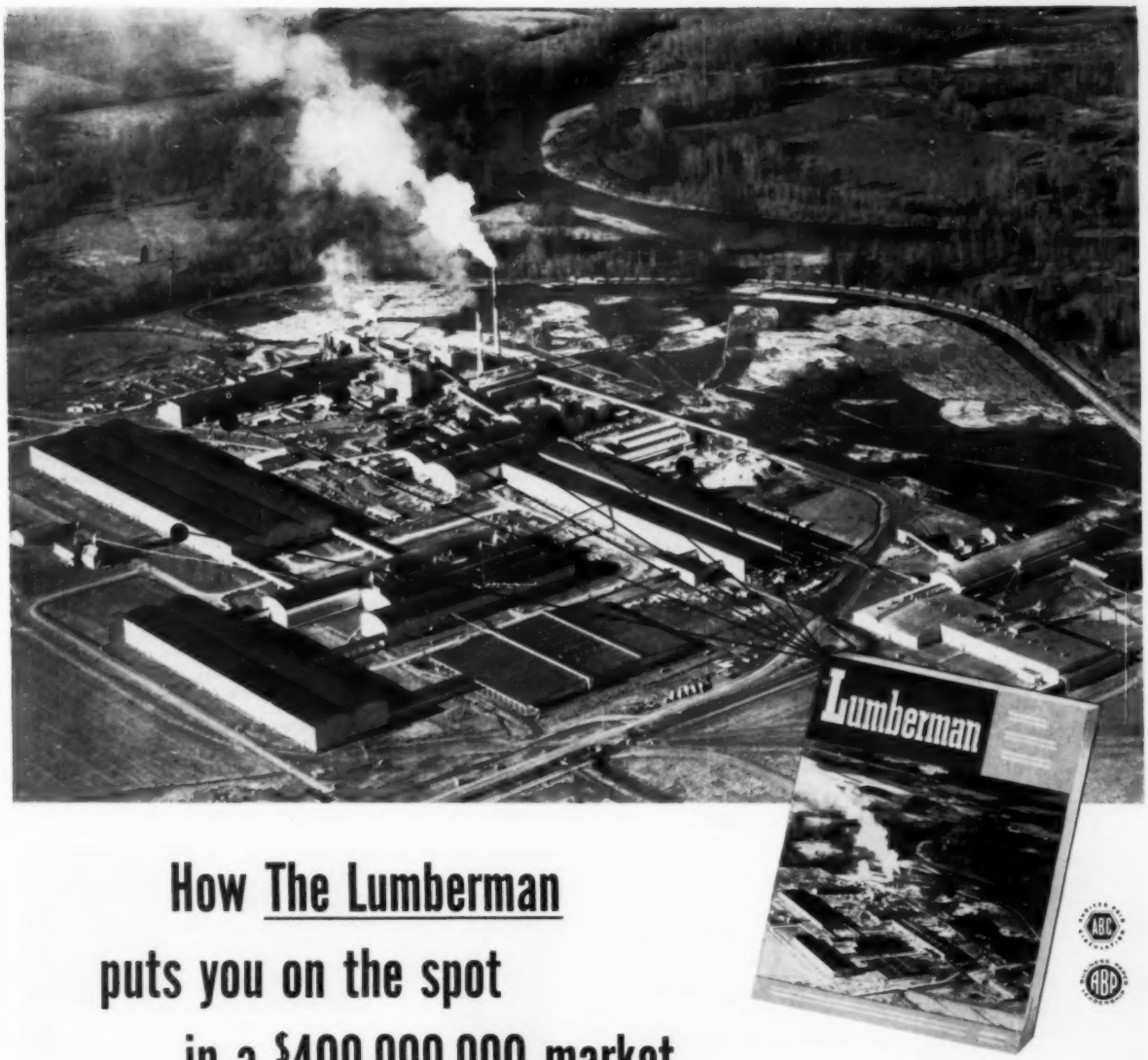
GREENLEE BROS. & CO., 1806 TWENTIETH AVE., ROCKFORD, ILL.



How The Lumberman puts you on the spot in a $400,000,000 market

Your advertising in **The Lumberman** meets the men at the mills *and* in the logging camps — Company Presidents, Mill Managers and Superintendents, Logging Superintendents and other supervisory personnel. They're buying almost half a billion dollars worth of plant improvements and equipment this year. And your advertising meets them person-to-person in **The Lumberman.**

The key to **The Lumberman's** leadership is its crisp, firsthand field editing by the industry's top team of forest-trained editors. Among national forest industry publications, **The Lumberman** leads in editorial contents, advertising volume and paid circulation and reaches well over 40% more key production personnel than the next publication.

For helpful information about "on-the-spot" coverage, write The Lumberman, Dept. MF-2, 71 Columbia St., Seattle 4, Wash.

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SPEAR & JACKSON

Circular SAWS

If you are interested in saws that cut two to three times as much lumber—sorry we can't help you!

But if you are interested in cutting well manufactured lumber with trouble-free saws—that's where we come in.

By locating our factory at Eugene, Oregon, close to the center of the lumber industry, we can offer direct factory - to - mill service in custom - made saws—good saws made on the Pacific Coast.

SPEAR & JACKSON

EUGENE, OREGON

Band, Gang, Circular Saws, Teeth and Holders

"The Saw Without a Flaw"

The Marvelous Montgomery

BLO-HOG

Patents Pending

(The only all-purpose hog in the world)

Eats Up Everything!

C.I.T. Terms Available

. . . including Pine, Oak, Gum, Hickory, Elm, Cedar, Wet Veneer and Sandy Bark. Conveyor-fed — no attendant required. Positively protected from major damage by tramp steel. All connections locked — nothing to shake loose. Maintenance costs unbelievably low.

". . . Dear Mr. Montgomery: It is an unbelievable machine and it is still hard to believe that it is actually handling the enormous volume of scrap we are feeding into it. We operate the hog without an attendant — which means a considerable saving." — J. B. BLACK, Ocala Mfg. Co., Ocala, Fla.

Sumner Iron Works, Everett, Washington W. Coast Rep
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JACKSONVILLE BLOW PIPE CO.

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We are prepared to supply your requirements right through the year

PONDEROSA PINE • SUGAR PINE
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Mouldings and Interior Trim
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OUR SPECIALTY • MIXED CARS TO THE TRADE

The Ralph L.
SMITH
Lumber Company

Mills at Anderson, Red Bluff, Castella & Wildwood, California

Sales Office at Anderson, California

Trucks Replace Railroads

(Continued from page 77)

adjusted the jill poke that pushed the last log load into the saltchuck.

For its truck fleet at Aero Camp the company has three Kenworth Model 848 specials with 300 h.p. Cummins diesels and chain drive, with 50 ton Columbia trailers. There are three 10-12 yard dump trucks—a Kenworth and two Hayes. The three have the same components—200 h.p. Cummins engines, Spicer transmission, 4600 Timken rear axles. Knuckey bogies are standard equipment.

The rig-up machine is a 981 Diamond T with 10-12 Lawrence yarder, with Gearmatic transmission. Crummies and other similar units include two International R-184's with steel bus bodies and air brakes; one International R-184 with 1,000 gallon tank and 200 gallon-per-minute fire pump; one Ford dump truck, two Dodge power wagons and a Ford pick-up truck. All this equipment, according to the present program, will be shifted to Alliford Bay eventually.

GEORGE BELL IS superintendent at Aero Camp, with Sam Stewart, woods foreman.

In addition to the camps mentioned, Powell River Co. has its big Juskatla operation farther north on the Queen Charlottes, a raft camp at Shannon Bay and a small show on Kumdis Island.

Aero Camp as a logging center dates back to World War I when H. R. MacMillan, with his career as entrepreneur still before him, helped organize the drive for airplane spruce on the Queen Charlottes. Top man in the federal government's setup for that purpose, a branch of the old Imperial Munitions Board, was Austin C. Taylor, later to make his fortune in mining and other interests.

After the war T. A. Kelley, who had been a logging contractor in the Queen Charlottes, moved in and took out logs for Powell River Co., and in 1935 A. P. Allison was active in the area.

More big names participated in the logging history of that part of the Queen Charlottes—R. J. Filberg, then head of Comox Logging & Railway Co. and now with Crown Zellerbach Canada; the late J. H. McDonald, of B. C. Manufacturing Co., since taken over by Powell River Co., and Percy Sills. They formed the World War II directors of the crown company set up by the Canadian government to expedite spruce production in World War II for the building of Spitfire fighter planes that helped save London in the Battle of Britain. The man they picked to head up the logging organization was John Liersch, then in charge of the forestry faculty at the University of British Columbia. In his present role with Powell River Co. Liersch is on familiar ground.

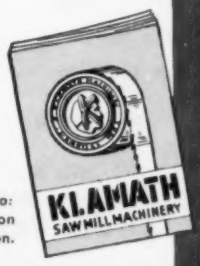
turns logs on the fly

KLAMATH MACHINE
Single Arm
LOG TURNER

The KLAMATH MACHINE Single Arm LOG TURNER can be installed in any mill *regardless of head room.* Sawyers develop the skill to turn logs on the fly . . . Available in standard or heavy duty construction with 8", 10" or 12" push arm cylinder . . . Does not deface upper grades of lumber with its quick acting, accurately controlled hook. Entire unit mounted in self-contained steel frame. Improvements in controls have been searched out and developed over many years of operation.

SAWMILL INFORMATION

Our new CATALOG illustrates our full line of sawmill machinery, including the Log Turner. This CATALOG will be sent to responsible sawmill operators on request.



Representatives in Washington, Montana and Northern Idaho: AIR MAC, Inc., 3838 Fourth Avenue South, Seattle 4, Washington and AIR MAC, Inc., E. 3710 Trent Avenue, Spokane 10, Washington.

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P. O. BOX 208 • KLAMATH FALLS, OREGON, U. S. A.
Look for the Indian Head on all **KLAMATH MACHINE** *products*
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PREVENTION
IS THE BEST FOE OF FIRE
NEXT BEST IS
WATER and
Porto Pump

Here is a portable rotary Neoprene Gear Pump designed specifically for forest fire fighting operations.

Specify Porto Pump because: Neoprene Gear Construction permits practically any water source, dirty or clean, to be used. Sealed bearing construction and mechanical seals eliminate manual shaft lubrication and packing adjustment. The lightweight Porto Pump is powered by a dependable 4-cycle engine . . . easy to operate and maintain.

PROTECT YOUR
PRECIOUS NATURAL
RESOURCES
WITH PORTO PUMP

It takes a long
time for
this seedling
to become
this tree.

Order Today!

Prompt shipment of pumps and service parts from stock.

PORTO-PUMP, INC.
19735 Ralston Detroit 3, Mich.
TELEPHONE: TOWNSEND 9-0507

Waferboard Uses Cross Grain Chips

(Continued from page 80)

cylinder 30 ft. long by 4 ft. in diameter fabricated by Union Iron Works (Spokane). Monsanto's Resinox 673 resin and Socal 110 petrolatum wax are also added at the mixer, the resin metered in through an Omega model RL-6 Rotolock feeder (Omega Machine Co.) A valve controls feed flow of the heated wax. As the materials tumble along through the inclined mixer the wafers become thoroughly covered with wax and resin before leaving at the discharge end.

IMPREGNATED STOCK SUBSEQUENTLY passes over Dings (Magnetic Separator Co.) magnetic pulleys, for removing tramp iron, enroute to rotating units which distribute stock to the felters. There are four of these distributors, one per felter. They evenly distribute wafers to a maze of 5 in. diameter sheetmetal pipes leading to each of four Tenex felters. The felters, one at a time, lay a uniform mat, of prescribed thickness, on a Republic Steel 11 ga. 4x16 ft. cauls which continuously move beneath the felters along a production line. Chain-carried deckle bars, synchronized with the production line, fit between ends of adjacent cauls throughout the mat forming process and break away upon clearing the fourth felter.

The number of felters used, and thickness of mat contributed by each, in making up Tenex panels is determined by end thickness of the finished panel. Speed of the cauls also varies according to panel thickness. When making ¼ in. Tenex only No. 2 and 3 felters are used.

A top caul is automatically placed on the finished mat by a precisely timed "flipper" operated by Bruning cylinders actuated by Racine solenoid valves. The resultant "sandwich" continues along the production line to a receiving elevator. This unit has capacity for 12 such "sandwiches". As one is added the accumulated caul-carried mats shift upward one space. This process continues until the unit is full.

A ram then moves all 12 mats into a receiving rack which carries them up to the press. There a loading ram takes over and moves the charge into the press.

The loading ram incorporates the use of 5 inch bore by 238 inch stroke hydraulic cylinders, made by Hydro Line Mfg. Co. (Rockford, Ill.) with Rivett solenoids.

THE PRESS, USING STEAM-heated Lake Erie Engineering (Corp., Buffalo, N. Y.) platens, has a temperature range of 208 to 405° F. Platen auxiliaries include Bracketubes and seamless, flexible tubing by American Brass Co. (Waterbury, Conn.). The press closes to predetermined thickness in 15 seconds. Both low and high pressure tanks are used for this action, a Worthington 10-7-10 type VC pump for the low-pressure tank and a Wagner 10-4-12 pump for the high.

A master control panel at the press permits the press operator to synchronize speed of the cauls, rate of feed to felters, and timing of all equipment on the caul line with the pressing schedule. Pressing may vary from five minutes, for ¼ in. board, to 30 minutes for ⅝ in. board. General Electric manufactured the controls and electrical equipment.

When pressing is completed, the press opens. As a new charge comes in, the 12 completed boards are ejected to a receiving elevator. From here the boards and cauls are removed, one at a time enroute to a caul separator. The separated cauls move onto the caul return line and the boards go, one at a time, to the trim-saw receiving rack.

This rack drops a board onto a saw table which grasps the board by suction and moves sideways past three Pacific carbide tipped saws. One of these cuts the 10 ft. panel at the center and each of the others remove 1½ in. end trim. Two traveling Pacific carbide tipped saws, spaced 4-ft. apart, then move the entire 16 ft. length, trimming 1½ in. at each side. Hydraulic cylinders then return the saw table, with its two 4x8 ft. Tenex panels, to original position where they are removed and stacked.

Each board is multiple checked for uniform thickness with "go, no-go" gauge.

Note: The patents for the process and all the new equipment are held by the licensors, Changewood Corporation, Suite 1160, 209 South La Salle Street, Chicago 4, Illinois, U. S. A.

What Is Tenex Waferboard?

Tenex is a decorative interior-type building panel composed of thin, rectangular wood wafers bonded together under heat and pressure by chemical resin to form 4 by 16 ft. sheets. This low resin content board (1½ to 3 percent) is distinctive from others of a somewhat similar type in that Tenex contains no chipped, ground or fiberized wood. Because it's composed of smooth wood wafers, the panels have solid edges. The strength reportedly approximates that of the component woods.

Seven native coniferous species (pines, larch, spruce, cedar, Douglas and white firs) are used in Tenex. These assorted woods make for unusual attractiveness and pattern of the two-side finish panels. The effect has been described as "three dimensional appearance" and readily lends itself to novel and unique finishing effects. It is worked with ordinary hand and power tools the same as natural wood.

"Glory Days of Logging"

• Running logs on Oregon rivers, yarding white pine with 12-ft. wheels, building and towing Davis and Benson rafts, hand logging in British Columbia, early sawmills and logging—are a few of the subjects covered in Ralph W. Andrews' new pictorial of logging's yesterday, "Glory Days of Logging."

The volume begins where Andrews' "This Was Logging" leaves off. The author scoured logging camps, mills and historical archives to collect memorable photographs, forgotten stories, great achievements, lumbering curiosities and colorful characters of the West Coast's logging hey day.

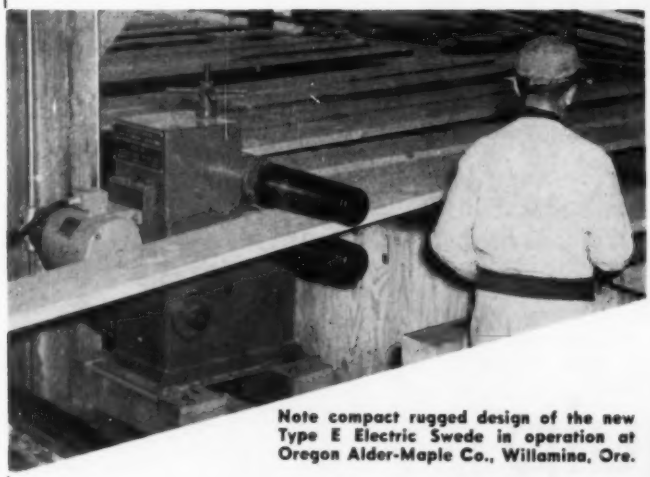
Andrews gives his own views of the logging woods and mills as he saw them after selling saws and working in Wisconsin sawmills. He offers highlights of text from ballads to humorous sketches by Jim Stevens, Stewart Holbrook, Paul Hosmer and others.

The book is available from Superior Publishing Co., Box 2190, Seattle.

SOME OF THE LOGGERS in the famous "grub strike" at Polson Logging Co. in 1901. "Men refused to eat camp food and left bag, baggage and bedbugs," says Ralph Andrews in "Glory Days of Logging"—new pictorial-historical book. (Photo H. G. Nelson from Rayonier, Inc.)

• **REDDING PINE MILLS,** Inc. has an Air-Electric modern band mill operating one mile south of the Paul Bunyan Lumber Co. at Redding, California. In 1955 the mill produced 26 million feet of lumber which was processed at the planing mill and drying yard at Cottonwood. The mill also purchased five million feet of rough lumber from other small mills. Redding Pine Mills is one of the many units in the Redding-Anderson area (see THE LUMBERMAN, May 1956) concerned with greater utilization of raw material.

Get Your Costs D-O-W-N—with A MOORE ELECTRIC SWEDE!



Note compact rugged design of the new Type E Electric Swede in operation at Oregon Alder-Maple Co., Willamina, Ore.

It's easy to see how the Moore Electric Swede does the heavy work on the sorting table, with its fast POWER pull-off.

It quickly pulls off the desired boards. It handles a range of thicknesses. It handles rough or finished lumber.

The Electric Swede never gets tired —and it works for only 8¢ an hour.

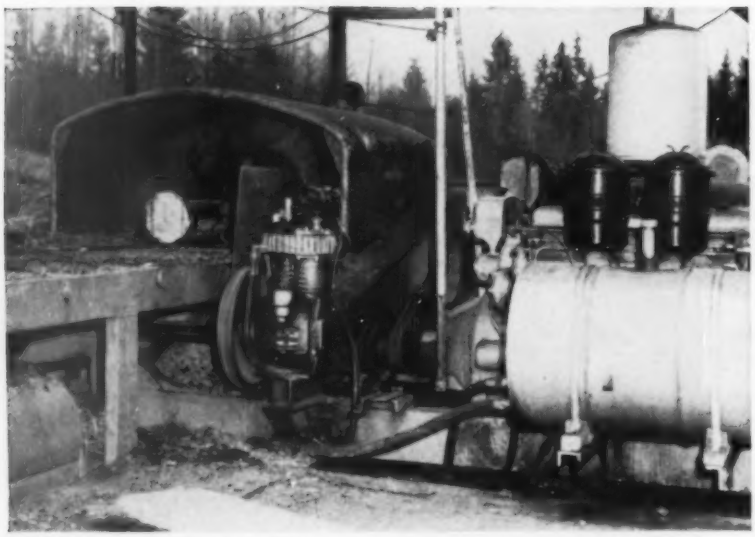
Practically every mill can use an Electric Swede profitably—can you?

Ask for your copy of Bulletin No. 5502 and a quotation today —no obligation!

MOORE DRY KILN COMPANY

Oldest and Largest Manufacturers of Dry Kilns and Veneer Dryers

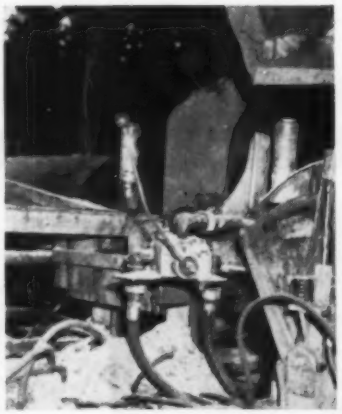
JACKSONVILLE FLORIDA · BRAMPTON ONT. CANADA · VANCOUVER B. C. CANADA · NORTH PORTLAND OREGON



Portable Skrag mill, with hydraulic reservoir on right and Aeroquip Flexible Hose Lines.

Portable Saw Mill Fluid Line Replacements Simplified With Aeroquip Bulk Hose, Reusable Fittings

Profitable portable saw mill operations call for constant production with minimum downtime. Take a tip from Consolidated Lumber Mfgrs. of Seattle, Wash. Consolidated replaces damaged hose lines quickly from a small supply of Aeroquip Bulk Hose and Reusable Fittings. Only shop tools are needed to make hose assemblies of any length, right in the field. For more information, call the Aeroquip Distributor listed in your Yellow Page Directory, or write for Bulletin 152.



Aeroquip hose lines supply hydraulic controls on this automatic mill.

Aeroquip

AERO-COUPLING CORPORATION

(A Subsidiary Of Aeroquip Corporation)

3015 Winona Avenue, Burbank, Calif.

SALES OFFICE AND WAREHOUSE FOR OREGON, WASHINGTON AND IDAHO:

SPARKS-WILLS, INC., 1624 S. E. GRAND AVE., PORTLAND 15, ORE.

Log & Lumber Prices

• Log Prices

Columbia River

Douglas Fir Peelers: No. 1 $115 to $130; No. 2 $105 to $120; No. 3 $85 to $95.
Douglas Fir Sawlogs: No. 1 $65; No. 2 $55 to $57.50; No. 3 $45 to $47.50.
Hemlock: Peelable $55 to $65; No. 1 $50 to $60; No. 2 $42.50 to $55; No. 3 $40.
White Fir: Same as Hemlock.
Noble Fir: Peelers $70; Sawlogs: No. 1 $65; No. 2 $60; No. 3 $40.
Cedar: No. 1 $100; No. 2 $42.50 to $45; No. 3 $35 to $40.
Spruce: Select $85 to $90; No. 1 $50 to $60; No. 2 $42.50 to $65; No. 3 $40 to $45.
Douglas Fir Wood Logs: $25 to $28.

Puget Sound

Douglas Fir Peelers: No. 1 $110; No. 2 $100; No. 3 $86.
Douglas Fir Sawlogs: No. 1 $67; No. 2 $63; No. 3 $51.
Hemlock: Peelable $59; No. 1 $52; No. 2 $43; No. 3 $40.
Cedar: No. 1 $110; No. 2 $60; No. 3 $40.

Grays Harbor

Douglas Fir Peelers: No. 1 $110; No. 2 $100; No. 3 $82.
Douglas Fir Sawlogs: No. 1 $70; No. 2 $63; No. 3 $44.
Hemlock: Peelable $55; No. 1 $51; No. 2 $40; No. 3 $38.
Cedar: No. 1 $95; No. 2 $48; No. 3 $39.
Spruce: Select: $90; No. 1 $65; No. 2 $47; No. 3 $41.

The following F.O.B. mill prices, based on Past Sales, were reported to the WESTERN PINE ASSOCIATION by members during the period 4/30 to 5/16/56 inclusive. Both direct and wholesale sales are included and are based on specified items only. They are for dry surfaced lumber.

PONDEROSA PINE

SELECTS S2 or 4S	4/4 RW	5/4 RW	6/4 RW
C Select RL	$258.39	$272.65	$267.97
D Select RL	221.68	227.83	225.15
SHOP S2S	No. 1	No. 2	
5/4	142.23	110.85	
6/4	142.22	110.73	
COMMONS S2 or 4S	No. 2	No. 3	
1 x 8" RL	115.06	84.08	
1 x 12" RL	122.31	84.12	
4/4 No. 4 Common S2 or 4S	66.28		

IDAHO WHITE PINE

SELECTS S2 or 4S	4/4RW	6/4RW	
Choice (C) RL	266.38	282.00	
Quality (D) RL	209.71	265.92	
COMMONS S2 or 4S	Colonial (#1)	Sterling (#2)	Stand. (#3)
1 x 8" RL		150.85	105.09
1 x 12" RL		161.70	106.27
4/4 UTILITY (#) S2 or 4S RW&L	71.25		

SUGAR PINE

SELECTS S2 or 4S	4/4 RW	5/4 RW	6/4 RW
#1 & 2 Clear RL	294.71	295.96	291.41
C Select RL	286.47	283.74	282.17
D Select RL	251.84	239.88	244.39
SHOP S2S	No.1	No. 2	No. 3
5/4	150.26	114.15	78.07
6/4	150.60	111.46	77.24
8/4	169.11	123.41	78.68

LARCH-DOUGLAS FIR

4/4 No. 3 Common S2 or S4	74.60
2 x 4 No. 1 Dimension RW&L	89.09
2 x 4 No. 2&Btr. Dimension RW&L	82.25

• Douglas Fir Prices

1x8 #3 or S KD	$ 67- 70.00
2x4 #1 Dimension S4S KD	94- 96.00
1x4 C&Btr VG Flooring KD	170-175.00
1x6 C&Btr Drop Siding KD	158-163.00
1x6 C&Btr S4S KD	170-175.00
1x8 C&Btr S4S KD	170-175.00
1x10 C&Btr S4S KD	175-180.00
1x12 C&Btr S4S KD	215-220.00

#1 Timbers and Plank

3x12 6-20'	$ 94- 97.00
3x12 22-24'	99-102.00
3x12 26-32'	107-112.00
4x4 6-20'	95- 98.00
4x4 22-24'	101-103.00
4x4 26x32'	108-113.00
6x6 8-20'	94- 97.00
6x6 23-30'	99-102.00

6x6	32-40′	114-117.00
8x8	8-20′	92- 95.00
8x8	22-30′	97-100.00
8x8	32x40′	112-115.00
6x10, 8x10, 10x10, 12x12,	8-20′	92- 95.00
6x10, 8x10, 10x10, 12x12,	22-30′	97-100.00
6x10, 8x10, 10x10, 12x12,	32x40′	112-115.00
Douglas Fir Cross Ties		72- 75.00

#1 Dimension (Green)

2x4	6-24′	$ 83- 86.00
2x6	6-24′	84- 87.00
2x8	6-24′	83- 86.00
2x12	6-24′	84- 87.00

#2 & Btr. Boards (Green)

1x4	6-20′	$ 57- 60.00
1x8	6-20′	75- 78.00
1x12	6-20′	75- 78.00

• Douglas Fir Plywood

5/16″ AD Int. basis..... .....$76 /M sq. ft.

• Red Cedar (industry standard) Shingles

Royals			
No. 1	24	4″3	$16.00
No. 2	24″	4/2	9.50- 10.50
No. 3	24″	4/2	5.00
Perfections			
No. 1	18″	5/2¼	12.50
No. 2	18″	5/2¼	6.00
No. 3	18″	5/2¼	3.75
XXXXX			
No. 1	16″	5/2	10.75
No. 2	16″	5/2	5.75
No. 3	16″	5/2	4.50

• Southern Pine Prices (KD Stock)

	BB	C	D
Vertical Grain Flooring			
1x4 Heart	250.00	235.00	200.00
Flat Grain Flooring			
1x4	160.00	150.00	120.00
1x6	175.00	165.00	125.00
Drop Siding			
1x6 #106	191.00	170.00	130.00
#116	191.00	170.00	130.00

Boards & Shiplap	1x6	1x8	1x10	1x12
#1	125.00	130.00	127.00	178.00
#2	83.00	88.00	85.00	98.00
#3	72.00	80.00	76.00	76.00

1# Dimension	12	14	16	18	20
2x4	98.00	100.00	100.00	118.00	123.00
2x6	100.00	104.00	101.00	115.00	120.00
2x8	97.00	97.00	95.00	115.00	120.00
2x10	110.00	107.00	113.00	130.00	135.00
2x12	125.00	120.00	122.00	145.00	150.00
#2 Dimension					
2x4	93.00	93.00	96.00	107.00	112.00
2x6	86.00	90.00	88.00	102.00	107.00
2x8	86.00	86.00	86.00	99.00	104.00
2x10	90.00	95.00	90.00	105.00	110.00
2x12	96.00	92.00	92.00	115.00	120.00
#3 Dimension					
2x4	76.00	76.00	80.00	86.00	91.00
2x6	73.00	73.00	73.00	80.00	85.00
2x8	75.00	71.00	71.00	75.00	80.00
2x10	67.00	72.00	67.00	72.00	80.00
2x12	67.00	67.00	67.00	77.00	82.00

• British Columbia Log Market

Reported by C. D. Schultz & Co., Ltd., Vancouver, B. C., consulting foresters and engineers.
(Log prices are per thousand feet board measure)

FIR—Log stocks extremely low, but the change in weather should bring about recovery. Demand very heavy on all grades, including fuel and particularly peelable stock. Price range still $52.50 to $62.50 for #3's, $62.50 to $72.50 for #2's, and $72.50 to 082.50 for #1's. Peeler price range $82.50 to $92.50 for #3's, $92.50 to $102.50 for #2's, and $102.50 to $112.50 for #1's.

CEDAR—Log stocks continue very low, demand constant, especially on shingle grades. Price range continues at $40.00 to $50.00 for #3's, $52.50 to $62.50 for #2's, and $67.50 to $77.50 for #1's. Lumber cedar price range $67.50 to $77.50 for #2's, and $77.50 to $87.50 for #1's. Tie cedar now at $42.50 to $52.50.

HEMLOCK & BALSAM—Log stocks unchanged, very low. Demand heavy. Price range still $40.00 to $50.00 for #3's, $47.50 to $57.50 for #2's, and $55.00 to $65.00 for #1's. Balsam price range $40.00 to $50.00 with most lumber and peelable balsam at the top of the price range.

Why Twin Disc Torque Converters are STANDARD in Skagit SJ-6 and SJ-8

For maximum efficiency and economy of operation, two versatile "brothers" of the Skagit Steel & Iron Works family of mobile logging units—the SJ-6 and SJ-8—have Twin Disc Torque Converters as standard equipment.

These yarders are used for a number of important jobs, including re-logging, pre-logging, thinning, salvage and selective logging — as well as production jobs. *Whatever the application,* they rely on Twin Disc Model F, 10,000 Series Short Coupled Torque Converters for automatic matching of power to load demands . . . for *constant,* high-horsepower output . . . for *elimination* of engine lugging and stalling . . . for *constant* line speed and tension . . . for cushioning *out* of shock loads and vibrations . . . for *longer* equipment life and less maintenance.

For a smoother, easier, more flexible flow of power—for longer equipment life—*specify* Twin Disc Torque Converters for *your* equipment. Twin Disc Clutch Company, Racine, Wis. Hydraulic Division, Rockford, Ill.

A Twin Disc Three-Stage Torque Converter is standard equipment on both the Skagit SJ-8 and SJ-6. Twin Disc offers a complete line of torque converters, both three-stage and single-stage, for engines from 30 to 1,000 hp.

TWIN DISC
CLUTCHES AND HYDRAULIC DRIVES

TWIN DISC
Torque Converters

You can reduce
downtime
and **re-sharpening time**
with these

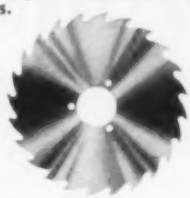
DISSTON SAWS

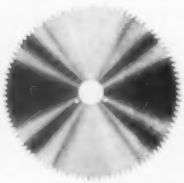
WIDE BAND SAWS AND BAND RE-SAWS

Disston teeth take and hold sharp corners. Highest quality steel; processed by the latest in heat-treating know-how; experienced craftsmanship in tensioning and fitting—all combine to give you a saw that takes maximum feeds and insures quality lumber at lowest production costs.

EDGER SAWS

Quality Disston Steel and heat treatment provide a saw that takes and holds good tooth edge and corners. Tensioned to run true by saw craftsmen.





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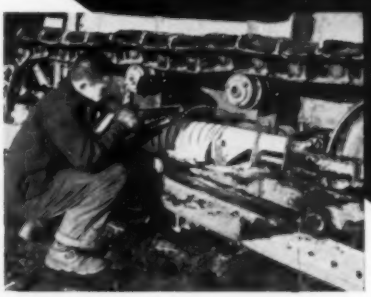

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BRADY BELCHER, Southern Pine Inspection Bureau.

Inspection Bureau Elects New Head

• Brady Belcher of Centreville, Alabama, succeeded B. A. Mayhew of Fordyce, Arkansas as Chairman of the Southern Pine Inspection Bureau at the sixteenth annual meeting of the Bureau held in New Orleans in April. R. B. Malcolm, Jr., of Wright City, Oklahoma and DeQueen, Arkansas, was elected Vice-Chairman. A. S. Boisfontaine was reappointed Secretary-Manager and Treasurer.

In a farewell address Mayhew stressed the vital importance of the SPIB program to the entire Southern Pine industry. He urged that a plan be developed for the more widespread participation by members of the industry in Bureau activities.

The newly elected Board of Governors of the Bureau consists of: B. H. Barnes, Barnes Lumber Corporation, Charlottesville, Va.; J. K. Barrow, Jr., Barrow Manufacturing Company, Ahoskie, N. C.; Brady Belcher, W. E. Belcher Lumber Company, Inc., Centreville, Ala.; Tom DeWeese, A. DeWeese Lumber Company, Inc., Philadelphia, Miss.; E. C. Gates, Fordyce Lumber Company, Fordyce, Ark.; J. K. Herndon, Kirby Lumber Corporation, Houston, Texas; E. C. Johnson, J. A. Bentley Lumber Company, Zimmerman, La.; R. B. Malcolm, Jr., Dierks Forests, Inc., Wright City, Okla.; W. H. McNeal, Argent Lumber Company, Hardeeville, S. C.; G. B. Saunders, Alexander Bros. Lumber Company, Columbus, Ga.; W. F. Walker, Dantzler Lumber & Export Company, Jacksonville, Fla.

Meet Brady Belcher

Brady Belcher, president of the W. E. Belcher Lumber Company of Centreville, Alabama, is a graduate of Southwestern University of Memphis. He comes of a family that long has been prominent in the lumber industry in Alabama, his father having started the W. E. Belcher Lumber Company more than 50 years ago.

Belcher has been active in the business since 1935 and is a director of the Alabama Forest Products Association as well as the Southern Pine Association. He has been a member of the SPIB Board of Governors for the past seven years. In addition to management of the big mill at Centreville, Mr. Belcher is very active in the Tree Farm and other industry activities in his state, and also in Presbyterian Church work.

His hobbies include fishing and photography, particularly motion pictures of recent trips.

How Gas Changed the Picture

(Continued from page 106)

Aside from the savings mentioned above, there are several other advantages in this installation. For one thing, gas controls have great flexibility. The heat can be jumped up instantly to the desired temperature and the dryer speeded up. If it is found that heating conditions need correction, they can be remedied right away. Maintenance and cleaning costs in the gas dryer are much lower than with the conventional steam dryer.

Results of glue line tests have been running very favorably, and well above average.

THE CONVERSION at Rainier Plywood Co. was carried out by Heat and Control, Inc., industrial process heating engineers. First installation of piping and wiring equipment was accomplished while the dryer and plant were in full operation in advance of the final burner installation. Only minor physical alterations in the existing dryer were necessary.

When natural gas is piped into the plant (sometime late in 1956), the plant will use up to 160,000 cubic feet per day. This gas will effect further savings over and above current economies.

President George F. Baum of Rainier Plywood Company believes that the controlled drying offered by gas firing will open the door to greater use of hemlock veneer for plywood. For his own company, aside from advantages mentioned above, gas-dried veneer will mean the plant will switch from interior to exterior plywood manufacture.

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Knife grinding accuracy — and speed — goes up, maintenance costs come down with Dependable's new and improved Hydro-Travl Knife Grinder.

Now equipped with the finest Solenoid valve available for controlling carriage travel, the Hydro-Travl gives you trouble free service for years to come. There's practically nothing to wear out. Solenoid valve is guaranteed up to 20 million reversals.

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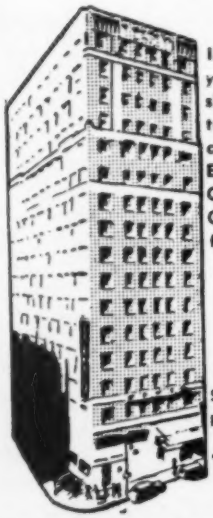

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Canadian Association Elects New Officers

• Extension of the Pacific Great Eastern Railway north of Prince George and into the Peace River country, now under way, will render a whole new timber empire accessible, according to Einar Gunderson, executive vice-president of the government-owned line and advisor to Premier W. A. C. Bennett.

Gunderson estimated that there would be enough pulpwood in the territory served by the expanded P. G. E. to provide for more than ten new pulp mills. He made this estimate while addressing the annual meeting of the Canadian Forestry Association in Vancouver, B.C.

M. J. Foley, president of Powell River Co., retired as president of the association after serving two years in that office, being succeeded by Brian Gattie, general manager of Western Forest Industries, a subsidiary of Alaska Pine & Cellulose. Bill Myring is secretary-manager.

The association has approved a budget of more than $56,000, up $9,000 from last year, for continuing the campaign for sound conservation in the forest. One of the many successful achievements of the association has been development of a corps of over 5500 junior forest wardens, supported by a strong framework of community councils.

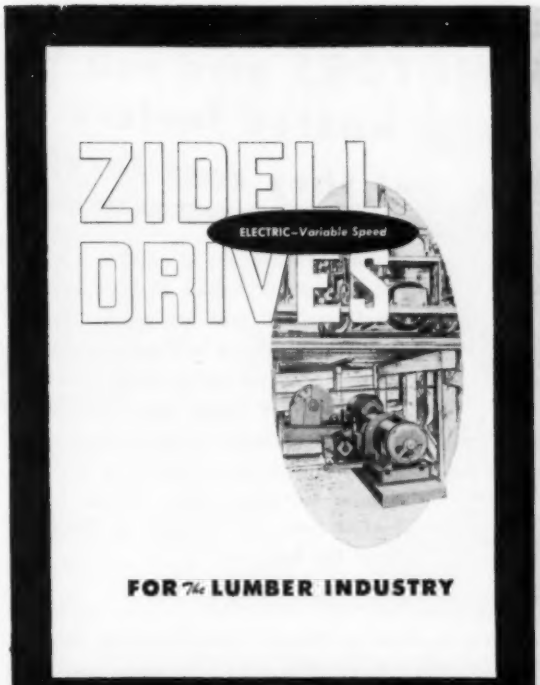
For the schools, the association has set up a program which includes a teachers' training manual designed to acquaint students with the economic importance of forestry and the forest industries. Educational work also is carried on in many other directions.

Fire Association Meets

• Oregon Forest Fire Association held its annual meeting in April in Portland, Ore., attended by representatives of the ten member fire patrol associations throughout the state, other industry organizations, state and federal agencies.

Members were shown the new motion picture film, entitled "Fire Weather," which was produced in cooperation with the Washington Forest Fire Association, the Oregon State Board of Forestry, and the industry.

Officers reelected were J. R. Frum, Crown Zellerbach Corp., Portland, president; William Ruhmann, Coos Bay Lumber Co., Coos Bay, first vice president; Nils Hult, Hult Lumber Co., Junction City, second vice president; Clyde S. Martin, Tacoma, Wash., honorary vice president; and Carl V. Hersey, Portland, secretary-treasurer. F. H. Brundage, Harbor Plywood Corp., Portland, was reelected as the Association's representative on the State Board of Forestry.



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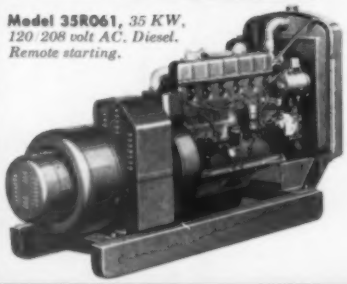

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NEW AND OLD OFFICERS of sawmill group are (L to r) LEONARD JOHNSON, retir. pres.; ART SORWEIDE, retir. sec.; DRIS HOLMAN, sec.; FLOYD RUSSELL, pres.

MECHANICS & FILERS at Lincoln Lumber hosted club tour. L to r: BEN JOHNSON, master mech.; THEODORE MAY, millwright; ORIN LITTLE, head filer behind May); LeVERN DAVIS, mill foreman.

Pine Area Sawmill Club Visits Two Mills in One Day

• The Inland Empire Sawmill Superintendents covered a lot of ground on April 27 during their semi-annual meeting. This group started the day with an inspection tour of the Lincoln Lumber Co. at Lincoln, Wash., and ended with another plant tour and dinner in Spokane.

New officers were elected, with Floyd Russell, Russell & Pugh Lumber Co., Springston, Ida., taking over the president's job from Leonard Johnson, Plant Manager, Lincoln Lumber Co. Dris Holman, Potlatch Forests, Inc., Lewiston, Ida., succeeds Art Sorweide, PFI, Potlatch, Ida., as club secretary.

Control Devices Described

(Continued from page 92)

Leandro, Calif. His material is Philippine mahogany, some of which may be air dried and some virtually green. The resistance type moisture meter can be operated from the instrument room without entering the kiln.

Heber Radcliffe, McCloud River Lumber Co., McCloud, Calif., described the use of the Moore-Bauer moisture content control at the Alexander-Stewart Lumber Co., Prineville, Ore. Results show, he said that working conditions for kiln operators have been improved, kiln production has been increased 9 percent and degrade from over and under drying has been reduced.

Establishment of drying schedules for fir, hemlock and cedar, using a Delmhorst moisture detector only, were outlined by L. H. Wood, Hult Lumber Co., Junction City, Ore. "It

The 1957 meeting of the Western Dry Kiln Clubs will be held in Longview, Wash., or Portland, Ore., in late May.

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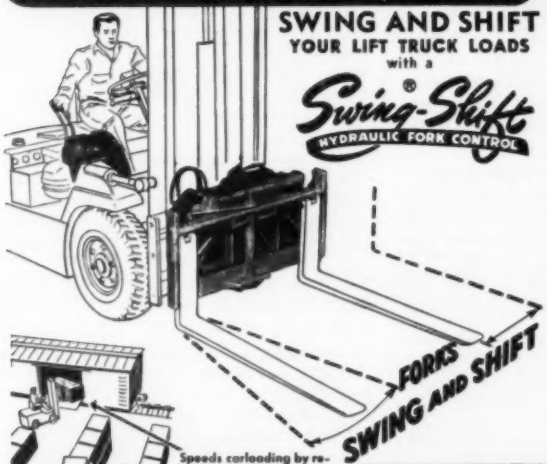

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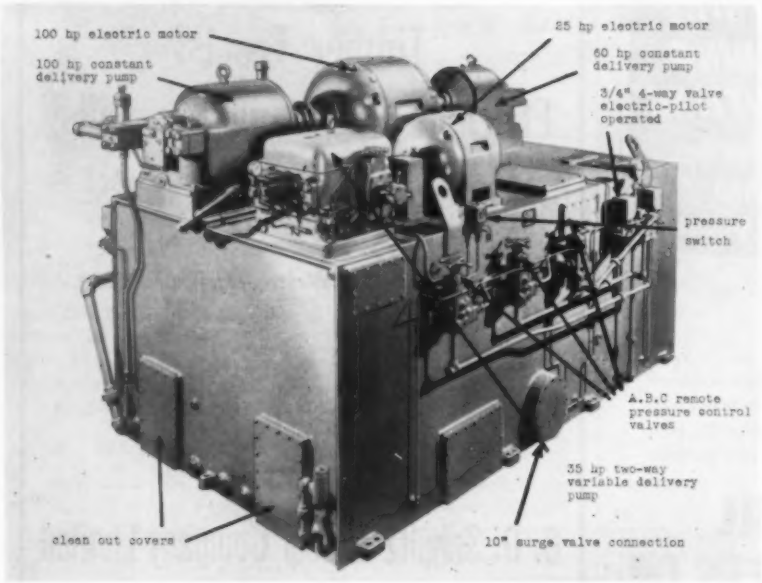
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Hydraulic Pump System for Large Press Is Concentrated in "Power Pak" on Reservoir Base

• There has been a definite trend toward consolidation of fluid power pumps, valves and accessories for complete press systems on reservoir bases presses shipped to this country without hydraulic equipment.

The photographs above illustrates an Oilgear "Power Pak" for operating an 1800-ton hot plate press and arranged for mounting additional equipment to accommodate the needs of a second similar press.

The reservoir base, with a 2250 gallon total and 1600 gallon differential capacity, is so designed as to provide power and control for another similar press. Provisions for valving and tubing plus mounting pads for installation of an additional unit have been made to allow easy transformation of the reservoir base to a dual-press Fluid Power System. The base, fully equipped, weighs 19,880 lbs., is 146¼" long, 82⅞" wide and 110" high and is provided with seven cleanout covers and two inspection covers. An air breather on the base has a capacity of 550 cipm. The high pressure pipes and fittings have welded joints.

Fluid power for the press system is supplied by two Oilgear constant delivery pumps and an Oilgear two-way variable delivery unit. One 100 hp constant delivery pump provides instead of mounting the valves on the presses or hanging them in the piping. This is often the case on hot plate presses; especially foreign made 25,000 cipm (108 gpm) at pressures up to 1700 psi and one 60 hp constant delivery pump provides 24,000 cipm (104 gpm) at pressures up to 1100 psi. The 35 hp two-way variable delivery pump furnishes 0-5500 cipm (23.8 gpm) at pressures up to 2500 psi. All units operate at 860 rpm.

How Power System Operates

In operation, the 20 opening push-up type press, with a dead weight of 120,000#, is closed at speeds up to 244 ipm by delivery of pumps 1, 2 and 3 to the jack rams. When the line pressure reaches 1300 psi, a pressure switch energizes a solenoid on a four-way valve, bypassing pump 2. The press continues to close at speeds up to 137 ipm by delivery of pumps 1 and 3 to the jack rams. At 2000 psi, the surge valve closes and pressure in the cylinders equalizes. Pump 2 is momentarily brought back into the system and press closes at speeds up to 43 ipm on pumps 1, 2 and 3. At 1300 psi line pressure, pump 2 will again be bypassed and the press will continue closing at speeds up to 24.4 ipm on pumps 1 and 3. At 2000 psi line pressure, pump 3 will be bypassed and the press will close at speeds up to 4.34 ipm on pump 1 until maximum desired pressure is reached (up to 2800 psi). Pump 1 holds the pressure set by remote pressure control valve "A" (250-2800 psi). A timer cuts out remote pressure control valve "A" and the pressure drops to the setting of remote pressure control valve "C" (180-480 psi). Another timer cuts out remote pressure control valve "C" and pump 1 holds the pressure to the setting of remote pressure control valve "B" (250-2800 psi). Pump 1 is equipped with an automatic pressure unloading control to reduce the power input and pump to slip stroke when holding the static load.

After remote pressure control valve "B" is timed out, decompression of the press will begin through pump 1 and then through an electrically operated 2½" two-way valve and a 1" orifice until 60 psi line pressure is reached. At this line pressure, the surge valve opens. Press moves downward at a rate governed by jack ram discharge through the 1" orifice. Timers and pressure switches can be varied to suit other process cycles.

Thumbnail List of New Equipment for Mill and Woods

• The Thew Shovel Co. has adopted a radically **new type of air controls** available on light models of their line of Lorain shovels and cranes, ranging from 20 to 30 ton capacity on crawler and rubber tire mountings.

These new "Air-Ease" controls operate all friction clutches by full metered-air power. Only two levers are used—instead of the usual 4 or more—to control boom derricking, boom brake, swing, crowd, retract, hoist, clam holding, drag-in, power load lowering and third drum.

• **LPG and natural gas conversions** of 'Jeep' L-Head and F-Head industrial engines are now available as optional equipment, announces Willys Motors, Inc., Industrial Engine Department.

The conversions have been found exceptionally efficient and economical by the Willys engineering staff, according to a company statement.

• **Tubeless tires have become standard equipment** on all Caterpillar No. 12 and No. 112 Motor Graders, according to an announcement by Caterpilar Tractor Co.

• Availability of a **friction type swing brake** on all shovel-cranes has been anounced by Link-Belt Speeder Corp. Particularly valuable for lifting crane operations calling for precision spotting of loads, the hydraulic control swing brake allows an operator to hold the boom in any desired position by easy fingertip control.

• Reported to mark four times as many stacked logs per hour and save 75 out of every 100 gallons of paint used now, a **new log marking paint and paint hammer** have been developed by the Nelson Co., Iron Mountain, Mich. In recent field tests by a large pulp company, the Nel-Spot Paint Hammer produced 20,000 marks to a gallon of paint.

• Designed to control clamp-type and similar single-acting air cylinders, a new "in-line" sleeve-type valve is now in production by Modernair Corp. A sliding sleeve actuates the valve. In "downstream" postion, air flows through to the cylinder; in "upstream" position, inlet air is cut off and exhaust ports opened. An extension on the sleeve deflects exhaust air to protect operator from air blast, blown chips or dirt.

• **A new brush cutter** for clearing brush, heavy undergrowth and overhanging branches is announced by McCulloch Motors Corp. It has a 6' reach, a 10" circular blade and weighs only 28 pounds. The brush cutter is especially useful for cutting fire trails, removing undergrowth, clearing for roads, and for thinning.

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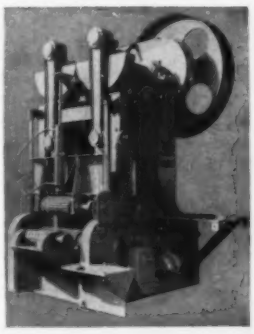

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See nearest Superior gang mill dealer: Air-Mac, Inc., Seattle, and Spokane, Wash. Pacific Woodworking Machy. Co., Berkeley, Calif., J. E. Dilworth Co., Memphis, Tenn.

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In This New Logging Equipment.....

Accent Is on More Speed, Power and Capacity

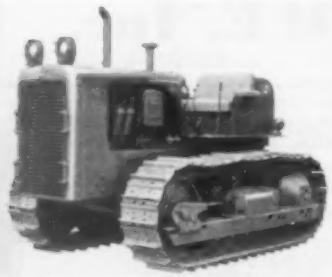
HERE'S THE LARGEST production model shovel-crane yet produced by Link-Belt Speeder, the 3 cubic yard K-608. The K-608 is convertible to shovel, crane, dragline, clamshell and piledriver attachments. It is designed for 3 yd. shovel operation with rated crane lifting capacity of 75 tons at 12' radius. Features are Speed-o-Matic hydraulic control and power hydraulic-actuated steering clutches.

★ ★ ★

New Wheel Tractor Is Being Built By Wisconsin Firm

• A full line of new light and medium-duty industrial wheel tractors and allied equipment is announced by Massey-Harris-Ferguson, Racine, Wis.

This new line "fills a gap" between present light and heavy industrial equipment, according to the manufacturer. The tractors are now in production. Attachments will range from loaders, back hoes and lift forks to dozer blades, trenchers and mowers.



MANY CHANGES in new TD's—International Harvester announces introduction of its newest and most advanced-engineered crawler tractor line, comprised of four models, the International TD-18 (above), TD-14, TD-9 and TD-6. Principal changes are substantially increased horsepower ratings in the TD-6, TD-9 and TD-14; new streamlined look; better visibility; Cerametallic clutch facings; pressurized covering systems; 500-hour track roller seals and all-weather, positive, easy-starting conversion systems.

New Blue Ox Skidder To Be Demonstrated All Over U.S.

• Four new rubber-tired FWD Blue Ox skidders are being demonstrated throughout southern, New England, and northwestern states by the Four Wheel Drive Auto Co., Clintonville, Wis.

Blue Ox units have driving power to all four wheels and are said to be capable of cutting skidding costs up to 50%. Display in south Georgia, north Florida, Mississippi, Louisiana, and Arkansas will be during May, June and July. The Blue Ox will be shown from mid-May throughout the summer in New England and another unit will be demonstrated in May, June and July in the west coast logging areas.

The Blue Ox can skid two cords of pulpwood, 800 feet of hardwood, or up to 1,500 feet of softwood at 5 mph over extremely-difficult terrain and 10 miles an hour over a fair skidding road.

NEW HEAVY-DUTY Type WB Insley log loader here is the first one to be delivered to an Oregon logger. It's on the Ray Cutright salvage operation in the Tillamook burn, at Jordan creek. The WB has a capacity of 35 tons and is equipped with Albin heel boom; mounting is a Maxi 64E self-propelled carrier. Wood Tractor of Portland is dealer.

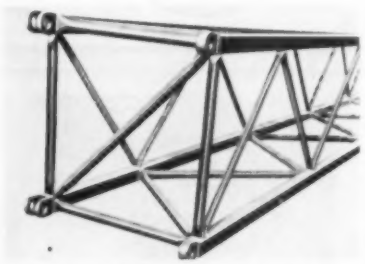
Torque Converter Adds Power

• Clark Equipment Co. Construction Machinery Division has introduced the Michigan Model 175 Tractor Logger featuring Clark-engineered and built power train, with a heavy duty torque converter, power shift transmission and planetary wheel drive and steer axles.

The 175 lifts 20,000 lbs. at zero mph.; at 4 mph. it is rated at 14,000 lbs. Two specially designed log clamps can handle a 6' diameter log or several smaller logs. Hydraulically-operated, they close to 16 inches, or can be adapted to close entirely.

CAPABLE OF HANDLING logs to 42,000 lbs. with a lift of 14 ft. This new "ATECO" extra-heavy duty loader for mounting on both new or previous model Caterpillar D8 tractors is now in production by American Tractor Equipment Corp., Oakland, Calif.

Accommodating logs to 7'3" in diameter, the ATECO loader is essentially a tilting fork-lift design with two forged hydraulically-powered grab arms to secure the log or logs in position. Fork tilt back is 10°-15° in lift position, 50°-60° in discharge position.



A NEW, ALL-WELDED crane boom featuring main chords of square tubes is now standard equipment on nine models of Lorain Crawlers and rubber-tire Cranes. This new design weighs 20-30% less than booms with chords of conventional tubes or angle steel and such weight savings are reflected in increases in the rated crane lifting capacities. The system is said to result in greatly increased strength and with reduced weight.

LATEST ENTRY in the logging field by LeTourneau-Westinghouse is this new 260 hp Model CA arch which features a unique power booster system in the rear wheels. Top speed is 25 mph. In exhaustive production tests in fir logging, the CA consistently delivered turns of 6-11,000 bd. ft. Power booster provides extra pull on steep grades, up to 50%.

News of Suppliers

- **Promotions**
- **Appointments**
- **Plant Expansions**
- **Mergers & Acquisitions**

New Faces in Important Places

• **FRANCIS D. HOLDEN** is newly elected vice president in charge of sales for Macwhyte Co. He was formerly sales manager . . . new western off-highway equipment sales representative for Mack Motor Truck Corp. is **STANLEY J.** ("Bud") **COFFEY**, ex-sales manager for Cummins Diesel Sales of Oregon. He'll headquarter in Los Angeles . . . **FRED H. JONES, Jr.**, has been appointed supervisor of district managers for McCulloch Motors Corp. He has been manager of the company's eastern district at Pittsburgh. . . . American Hoist & Derrick Co.'s new sales promotion and market coverage program is being spearheaded by **DON W. MARTIN.** He'll head the new Sales Development Department and work with distributors. Martin moves from Schield Bantam Co., Waverly, Iowa, where he has been assistant advertising and sales development manager. . . . personnel changes in the Vancouver, B. C. area include: appointment of **A. M. C. KENNING** as manager of Vancouver

Koeneke Appointed Consultant

After 38 years' service with Skookum Co., Portland, Ore., JOE KOENEKE, (left) vice president in charge of production, is stepping aside because of ill health; he will continue as v. p. and consultant to keep an eye on production. KEN WERNSING (right) has been promoted to vice president general sales manager. Formerly sales manager, Wernsing was with Esco up to six years ago when he joined Skookum, manufacturers of blocks and forgings for heavy industry.

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Machinery Depot; formation of a partnership in sawmill engineering and design and general consulting practise for the industry, by **A. L. SWANSON** and **H. R. WRIGHT**; appointment of **GORDON CHUTTER** as chairman of the board of Wright's Canadian Ropes, of **PHILIP G. CHUTTER** as managing director; of **JOHN CLARK** as sales manager. **J. E. USBORNE**, for many years general sales manager, has resigned. . . . the many friends of **BERNARD L.** "Ben" **HAGGLUND**, 60, southwestern sales manager, Caterpillar Tractor

More Responsibility for Trio

EXPANSION IN SALES for White Motor Co. prompts three important promotions in the Pacific coast region. HOWARD P. STROTHER (left), former manager of the Oakland and San Francisco branches, is the new Los Angeles branch manager. He's succeeded at S. F. by FRED H. RAGAN (middle), ex-territory manager in Salt Lake City and Denver. LAWRENCE N. LYNCH succeeds Ragan at Denver. He is promoted from the Denver retail sales staff. White reports that sales in 1955 were the best in company history, in the west; 1956 sales to date are running 40% ahead of 1955.

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Co., with headquarters in San Francisco, were shocked to learn of his death last month following a short illness. He was a veteran of 26 years with Caterpillar. A native of Essex, Iowa, he graduated from Iowa State College, and moved to California after army service in World War I. He leaves a wife, and three children. . . . **JACK G. ERRION** is the new assistant to domestic sales manager **W. E. HENDRICKS** at LeTourneau-Westinghouse Co., Peoria. He has been

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Woodard Lumber Co. Cottage Grove, Oregon
Weyerhaeuser Timber Co. Klamath Falls, Oregon
Long-Bell Lumber Co. Longview, Washington Vaughn, Oregon Gardiner, Oregon
Cascades Plywood Corp. Lebanon, Oregon
Bohemia Lumber Co. Culp Creek, Oregon
Oregon Lumber Co. Dee, Oregon
Pope & Talbot Lumber Co. Oakridge and St. Helens,

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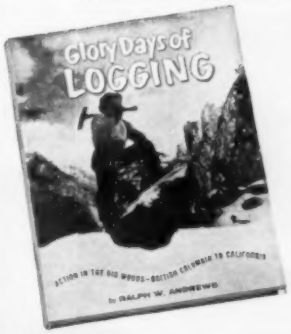

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serving as sales promotion manager; he will direct LeT-W's sales training program. . . . **A. W. PLIER** was re-elected president and general manager of D. J. Murray Mfg. Co. All other officers were returned to their posts. Murray employs 400 persons. . . . **JOHN L. McCAFFREY,** formerly president, last month was elected chairman of the board and chief executive officer of International Harvester Co. **PETER V. MOULDER,** ex-v. p. for merchandising service, is the new president. **FRANK W. JENKS** was elected executive vice pres. for merchandising and **HARRY O. BERCHER** is in a similar post in charge of steel, purchasing and traffic. . . . All above I-H men have long years of service in the company; McCaffrey is senior with 47 years, Moulder 46, Jenks 42 and Bercher 28. . . . Caterpillar has appointed **E. C. (CHAPPIE) CHAPMAN** (left) sales manager, eastern division, moved up from ass't. mgr. He succeeds **W. E. McCOY,** transferred to San Francisco headquarters for two western divisions. **FRANK FOSTER,** (middle), asst. sales mgr. SW div., transfers to Peoria to take over Chapman's former duties. **RALPH EHNI** (right) follows Foster in the SW div.

GENE HINKEN has been promoted to the position of manager of the Portland Ore., branch of Union Wire Rope Manufacturing Company. He formerly was with the head office of Union in Milwaukee, Wis.

JACK E. FLEMING: new district sales repr. in Pacific Northwest for Link-Belt Speeder. He'll cover Ore., Wash., Ida., B.C. and Alaska. Fleming will work out of Portland, where he now lives.

Covering Southern California

THIS TRIO OF NORTON engineers was recently appointed to new posts in the southern California area. **ROBERT N. HAMILTON** (left) and **ROBERT P. COOPER** (middle) have been named abrasive engineers in the Los Angeles district office. **GORDON F. COLSON** is now field engineer at the Huntington Park office. All three have several years service with Norton Co.; and all have engineering degrees from well-known colleges.

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THOMAS W. MILLER: now heads sales of R. G. LeTourneau, Inc., Longview, Texas, logging equipment. He was formerly with Nelson Equipment Co., Portland, Ore. He'll work out of Portland contacting distributors.

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Dealer & Distributor News

• Two new Louisiana dealers have been appointed to handle the Michigan line of the Construction Machinery Div. of Clark Equipment Co. **E. C. RAY** Machinery Co., Highway 80, Shreveport, will sell in the parishes of Caddo, Bossier, Webster, Claiborne, DeSoto, Red River and Bienville. **GENERAL EQUIPMENT CO.,** 435 Richland Ave. at Government St. in Baton Rouge will sell and service Michigan Tractor Shovels and Excavator Crane parts only, covering 28 parishes in that section of Louisiana. . . . . Peterbilt has appointed **MOTOR TRUCK DISTRIBUTORS** Co., 2340 East Olympic Blvd., Los Angeles, as the new distributor in southern California. This firm recently purchased all facilities of Carl N. Frank Truck Sales and moved them to the new location. Harry Valentine heads the new distributor, Ned B. Tilt is vice president and secretary and Ray Lawrence as sales manager. As extensive service department is available for all heavy duty diesel trucks. . . . . **PACIFIC FISHING AND TRADING CO.,** Seattle, is new distributor for Allis-Chalmers-Buda Division engines. W. J. Angus is vice president and general manager. Complete line of AC-Buda engines will be carried; complete shop, service and parts facilities are provided. Sales and service repr. is Leo Weberg; W. Huff is sales manager and Vern Lien parts manager. The company is located at 1403 W. 45th at the foot of NW 14th in the Ballard district. . . . **INSTRUMENT SALES & SERVICE CO,,** Portland, Ore., has moved to new and larger quarters: 315 S.E. 7th Ave., corner of Pine. Owner Jess Roseberry announces provision is made for largest trucks to run in for quick changeovers, plus on-the-car speedometer testing. On June 1, the firm celebrated 6½ years as representative for Stewart-Warner instruments on their automotive and industrial equipment lines. Plenty of parking at new location. . . . **PLATT ELECTRIC SUPPLY,** Inc., 1305 N.W. Davis, Portland, Ore., has been appointed distributor for the full line of Clark Controller Co. motor control equipment. Jack Rinehart will direct a territory including all of Pacific NW, including Alaska. He is Platt's apparatus dept. manager. . . . Keystone Machine Works, Roseburg, Ore., manufacturer of sawmill machinery, has appointed **AIR-MAC, INC.,** as exclusive representative in

New Owners of Old Firm

THE MACHINERY and equipment firm of A. B. Wing, Ltd., Vancouver, B. C., has been completely acquired by three veteran senior members of the original firm: (above, L to R) **F. A. TEMPLETON, C. D. A. TWEEDALE** and **W. E. JONES.** All are native sons of Vancouver and individually have had wide and varied experience in their field. Templeton will be president and general manager, Tweedal vice president and director and Jones secretary-treasurer and comptroller. All logging and construction equipment lines previously handled will remain with the company, including Northwest shovels.

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Modernize Your Mill with Mater Automatic Sawmill Machinery

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MATER MACHINE WORKS • Corvallis, Oregon

Wash., N. Idaho, Montana and Alaska. Air-Mac maintains complete sales, parts and services at Seattle, and Spokane and has sales offices in Tacoma, Yakima and Missoula. The Portland office will serve the Columbia river counties in Wash.

ANDREW C. PERRIN
West coast district sales manager for Reliance

New W. Coast Plant

• Formal opening of the new Burlingame, Calif., $500,000 assembly plant and distribution center for Reliance Electric & Engineering Co. and its recently acquired Reeves Pulley division, was held May 24th.

Reliance Pres. J. W. Corey, who is president of the National Electrical Manufacturers Association, and other executives from the company head office in Cleveland participated.

Men who set up the new Burlingame plant were Andrew C. Perrin (see cut), Purdue E.E. graduate and sales application engineer with the firm for nine years, and Robert G. Sullivan, a mechanical engineer in charge of the Reeves Pully division. Reeves and Reliance merged a year ago. Sales, service, warehousing and assembly operations of both organizations will be carried out here.

More Expansion Underway for Forest Industries Suppliers

• New manufacturing facilities at Puente, Calif., (near Los Angeles) are being built for **INSLEY** Mfg. Corp. of Indianapolis. **MAXI** Corp., Insley subsidiary, will also occupy the new plant. Western and export markets will be supplied from this new factory. . . . Caterpillar has formed a new Parts Department in Denver. Construction will soon begin on a new modern building. The Rocky Mtn. and Pacific coast regions will be served from here.

GEORGE J. CARR
New president and chairman is well-known in western logging circles.

Roy E. Wood Dies in Accident; Ex-Carco Manager Now at Helm

• Roy E. Wood, president and chairman of Wood Tractor Co., Portland, Ore., died in a fatal fishing accident April 28 on the Metolius river. The logging and construction equipment business is being carried on without interruption.

George J. Carr is the new head of the firm. He has been associated with Pacific Car & Foundry Co. for the last 17 years. He served there in the parts, service and sales departments, and in other capacities and for seven years headed Carco tractor equipment division. For past three years he has been Pacific Car general manager.

The Wood company is Portland area dealer for Allis-Chalmers logging and road-building machinery, Insley and Schield Bantam excavator-cranes, Carco tractor equipment and other allied lines. Other company officers are: Mrs. Roy E. Wood, vice pres.; N. E. Gurney, general manager; and A. J. Wherity, sec.-treas.

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. . . **MACWHYTE** has opened a new office and warehouse in Detroit at 75 Oakman Blvd. . . . Aurora, Ill., is the site for a new plant of **CATERPILLAR** Tractor Co. Four models of "Cat" machines will be built there, the D2 and D4 crawlers and corresponding models of Traxcavators. Capacity increases are also planned at other company plants in Decatur and Joliet, Ill. . . . the Industrial Power Division of **INTERNATIONAL HARVESTER** Co., Chicago, is now known as the Construction Equipment Division. The name change applies only to the division itself and personnel and equipment are not affected.

Rhodes Now Chapman Division

RHODES CHEMICAL CO., Gate, Wash., distributors for eight prominent manufacturers of chemicals, has become the Rhodes Chemical Co. Division of the Chapman Chemical Co. This news was jointly announced last month by ROBERT C. RHODES (left), owner of the Rhodes firm, and LYLE W. SALQUIST, manager of Pacific coast sales for Chapman, located in Portland; they were snapped by THE LUMBERMAN at the Olympic Logging Conference in Victoria, B. C. Bob Rhodes will head up the new division and will continue to offer sales and service to sawmills, plywood plants and timber operators in the Pacific northwest, for Chapman Chemicals and the other regular lines.

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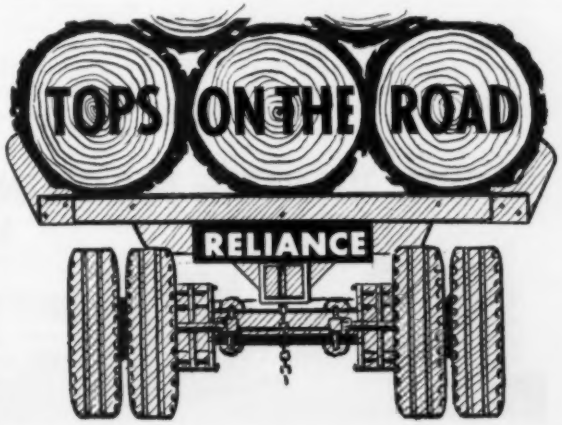
Tide Water Associated Oil Company has shortened its name to just **TIDEWATER OIL CO.** The Flying A and Veedol trade names will be retained. . . .

Porter Divisions Hosts

"The H. K. Porter Story" was told and illustrated at a company party in Seattle, May 10. The Henry Disston Division and the Leschen Wire Rope Division, both for many years closely associated with the forest industries, were hosts at the party. Some five hundred customers and friends of the thirteen Porter Divisions attended. Following cocktails, color films were shown of plants and facilities of the firms in the H. K. Porter organization whose sales last year exceeded $100,000,000. Herb Waltman, Leschen's Northwest manager, welcomed the guests. Largest delegation of company representatives was from Disston. In addition to the Disston and Leschen men present, there were representatives from The LaClede Christy and Quaker Pioneer divisions.



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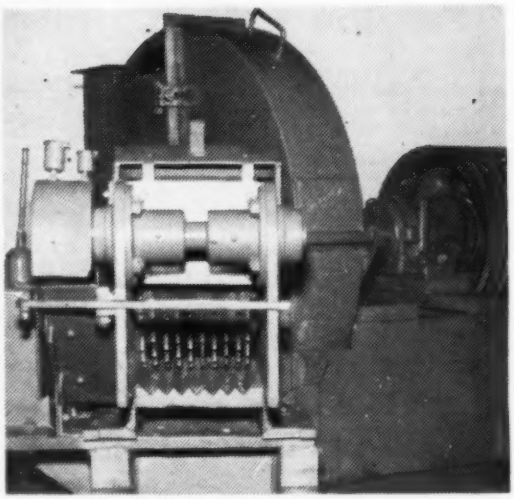
THE RAY SMYTHE CO., specialists in sale of Heppenstall alloy chipper knives and Carthage chippers and wood room equipment and pulp and paper machinery recently moved into expanded headquarters at suite 511 Park Bldg., Portland, Ore. Associated with Ray Smythe is son Robert Smythe and Sid Moore, engr. Shown at left is one of the Carthage power feed chippers with a horizontal spout. These chippers are making uniform chips from slabs and waste wood. Carthage also builds heavy duty (whole log) chippers both of standard multiknife design and Norman design for sale on the Pacific Coast and Canada. Ray Smythe has had 25 years of experience in the sales and service of chippers.



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Liquidations in Progress

• The East mill of Long-Bell Lumber Co. at Longview, Wash., is being liquidated by Bader & Carroll Machy. Co., Portland, Ore. They are also liquidating the Monroe Lbr. Co. mill, Eugene, Monarch sawmill, Clackamas, Corvallis Lbr. Co. mill, Corvallis, Albany Lbr. Co. mill and planing mill, Albany, and Irwin-Lyons sawmill, North Bend, all in Oregon.

Complete offices and phone services are provided at each plant for prompt service.

Jim Massey is sales superintendent for the Longview, Albany and Corvallis operations and Clyde P. Carroll, Jr. at Clackamas, Eugene and North Bend operations. The salesman at the Long-Bell mill is Hirschel Mauk. At Albany, Ore. H. D. Jackson is in charge and at the Corvallis, Earl Creason. Adrian Unger is salesman in charge at Clackamas, Ore., and Carney Phelps at Eugene. At North Bend, Ore. Bill Kunkle is salesman in charge.

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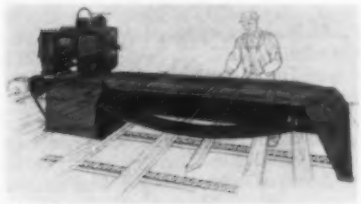
Chain Saw Industry Forms New Trade Association

• The newly organized Chain Saw Association held its first formal meeting on April 3 at Roosevelt hotel, New Orleans. With approximately 50 representatives of manufacturers and suppliers in attendance, there was a concentrated and enthusiastic interest in the discussion sessions.

According to Minita Westcott, who is managing the affairs of this Association, the next formal meeting of this group will be held in September 1956, time and place to be announced.

Membership in the Association is open to any individual, partnership or corporation actively engaged in the manufacture, or assembly at the manufacturing level, of Chain Saws, or in the manufacture of component parts of Chain Saws. Headquarters are 2217 Tribune Tower, Chicago 11.



No Crayons in New System

A TEXAS PLANT, Kirby Lumber Co., Silsbee, got the first units of this new Stetson-Ross WT-100 automatic grademarker. Weyerhaeuser Tbr. Co. has built similar machines. The grader positions end of board corresponding to its correct grade. As boards pass grademarker, the correct printer is actuated by means of electric eye. Pieces to be retrimmed are pulled out slightly beyond chains for automatic takeaway.

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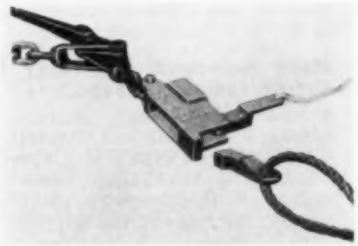
• The LUNDY BROS. Lbr. Co., Waldport, Ore. recently installed a Salem Equip. & Supply Co. 66″ resaw.



For Safer Log Unloading

A NEW QUICK-ACTING safety release for log load binders developed by Charles A. Wilson, logging supt., and Gordon Boyes, master mechanic, truck shop, J. Neils Lumber Co., is now made and marketed by Electric Steel Foundry Co. It permits binders to be released from a safe distance from the load by merely pulling the safety catch with attached line.

★ ★ ★

• HERMAN LBR. CO. at Mission, B. C. has also installed a Salem 66″ resaw.

••COE VENEER MACHINERY••SUPREME SINCE 1852

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AIR CYLINDERS & VALVES
Caldwell Machinery Co., Portland, Ore.

AIR MOTORS
Gardner-Denver Co., Quincy, Ill.
Salem Equipment & Supply Co., Salem, Ore

APPRAISALS
General Appraisal Co., Seattle, Portland, San Francisco

ARCHES
Hyster Company, Portland, Ore.
Pacific Car & Foundry Co., Renton, Wash.

AXLES
Eaton Manufacturing Co., Cleveland, Ohio
Roberts Motor Co., Portland
Timken-Detroit Axle Co., Detroit

BAND WHEEL GRINDING
Walker Saw & Mill Service, Cloverdale, Calif.
Wilder Saw Works, Fresno, Calif.

BARKERS, LOG
Sumner Iron Works, Everett, Wash.
Nicholson Manufacturing Co., Seattle
Soderhamn Machine Mfg. Co., Talladega, Alabama

BEARINGS
Chain Belt Co., Seattle, Portland, San Francisco
Dodge Manufacturing Co., Mishawaka, Ind., San Francisco, Portland, Seattle
Fafnir Bearing Co., New Britain, Conn.
Link-Belt Co., Seattle, Portland, San Francisco
J. W. Minder Chain & Gear Co., Portland, Los Angeles

BELTING AND PACKING
Gates Rubber Co., Denver
Goodyear Tire & Rubber Co., Akron
J. W. Minder Chain & Gear Co., Portland
Raybestos-Manhattan, Inc., Passaic, N. J.; Portland, Seattle
U. S. Rubber Co., Mechanical Goods Div., New York

BLOWPIPE SYSTEMS
American Sheet Metal Works, Portland
Anderson Blowpipe & Mfg. Co., Seattle
Archer Blower & Pipe Co., Portland
Rees Blow Pipe Mfg. Co., San Francisco

BLUE PRINTING
Chas. Bruning Co., Inc., Portland

BOILERS AND ACCESSORIES
Gabriel Boiler & Fabrication Co., Portland
Seattle Boiler Works, Seattle

BOOMS—Loading
Eugene Truck & Machine Co., Eugene, Ore.
Young Iron Works, Seattle

BOOM BOATS
L. S. Baier & Associates, Portland
Gunderson Bros. Engineering, Portland
Nichols Boat Works Co., Hood River, Ore.

BRAKE BLOCKS AND LININGS
Champion Friction Co., Eugene, Ore.
World Bestos, Newcastle, Ind.

BULLDOZERS
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Caterpillar Tractor Co., Peoria, Ill.
Howard-Cooper Corp., Portland, Seattle
Pacific Car & Foundry Co., Renton, Wash.

CARRIAGES—Riderless—Automatic
Corley Mfg. Co., Chattanooga, Portland, Little Rock
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Monarch Forge & Machine Wks., Portland, Ore.
Peters Co., Portland, Oregon
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Link-Belt Co., Seattle, Portland, San Francisco

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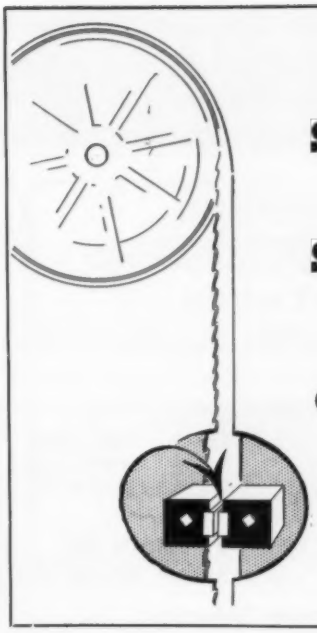
Moline Malleable Iron Co., St. Charles, Ill.; Tacoma, Wash.; Seattle, Portland, Los Angeles
Jeffrey Mfg. Co., Columbus, Ohio
Northwest Chains and Sprockets, Inc., Seattle, Portland
Peoria Malleable Castings Co., Peoria, Ill.; Portland, Ore.
Portland Chain Mfg. Co., Portland



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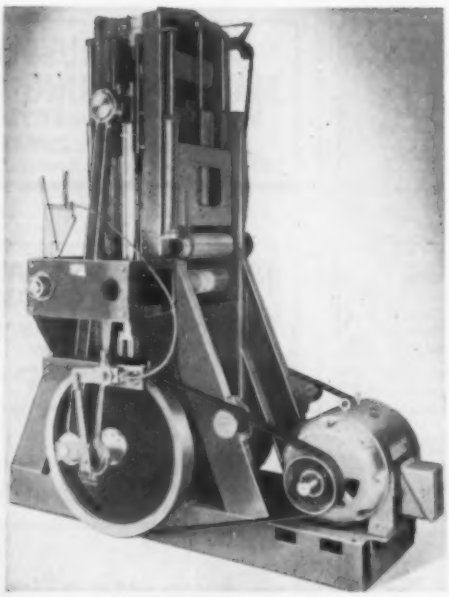

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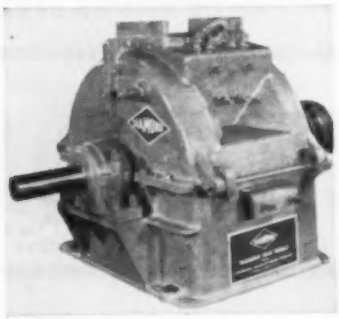

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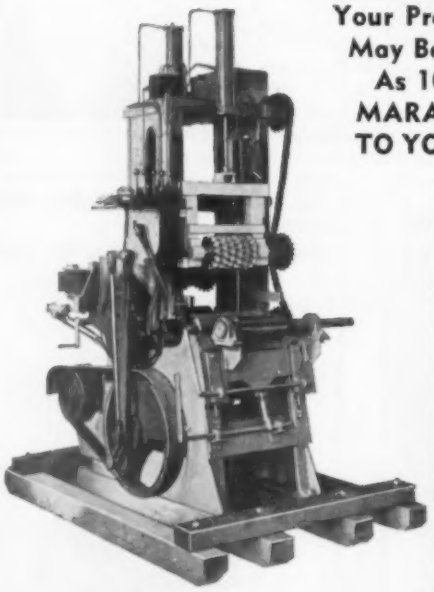

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Link-Belt Co., Seattle, Portland, San Francisco
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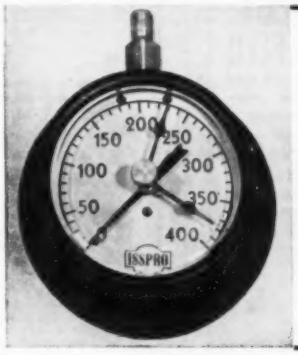

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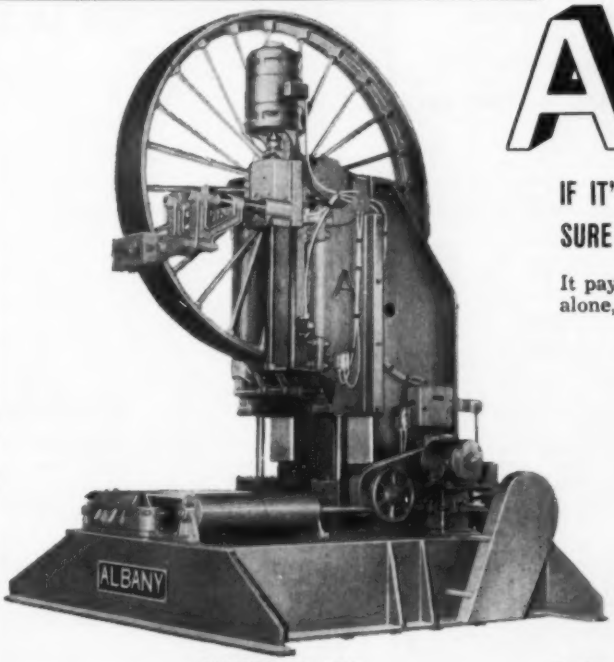

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650/16	6 ply	8.95
600/17	6 ply	8.95
700/15	6 ply	11.95
700/15	8 ply	13.95
600/20	6 ply	9.95
750/16	8 ply	15.00
700/16	6 ply	15.00
750/18	8 ply	15.00
750/20	8 ply	14.95
750/20	10 ply	24.95
900/16	8 ply	14.95
900/20	10 ply	20.00
1000/20	10 ply	25.00
1100/22	12 ply	27.50
1200/20	14 ply	32.50
1100/24	12 ply	27.50
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900/20	10 ply UNUSED N.D.	1st 50.00
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750/20	8 ply	25.00
900/20	10 ply	42.50
1100/18	10 ply	22.50
1000/22	12 ply	50.00
1100/20	12 ply	55.00
1100/20	14 ply	60.00
1400/24	20 ply	100.00

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750/16 HI-WAY TAKE OFFS 25.00

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1050/24	12 ply	Unused N.D. 1st 75.00

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1—Ross Series 90-6544, 52 x 40 package
2—Ross Series 90-6556, 52 x 52 package
1—Ross Model 11 Series 6144, 42 x 48 package
1—Ross Model 11 Series 6044, 42 x 48 package
1—Willamette Hyster Utility, Series 6045, 42 x 48 package
1—Willamette Hyster Utility, Series 5445, 42 x 42 package

PLANERS & MOULDERS

1—77 American 19" Planer with double profiler
1—Yates #91, 6 x 20" Planer, 6 knife
1—Newman #512 planer, 24 x 6, 8 knife double profile, ball bearing, feed table
1—Newman 4 head 10" roll, all electric moulder, 12" heads
2—Yates C88 8" electric moulders
1—American #5 10" ball bearing side head moulder

MISCELLANEOUS

1—Yates 54" twin vertical ball bearing resaw for single and double resawing, large production machine
1—54" Mershon Standard Vertical Resaw
1—54" American Resaw
1—66" Mershon Resaw
1—American #40 Straight Line Ripsaw
1—Mattison Straight Line Cut-Off Saw, motorized, No. 244
1—Yates No. 235 Cut-Off Saw
1—Hanchett No. 46 Automatic Gang Saw Sharpener
1—Yates No. 213 Glue Jointer, motorized
1—American No. 112, 6 x 26 Double Surfacer
1—281 Band Ripsaw
1—Yates 283 Resaw, 44" tilt rolls, motor V-belted
1—Peters carriage, 2 block, 54" opening, hydraulic set. Cost approximately $10,080.00. Practically new, for QUICK SALE—SPECIAL PRICE: $2,500.00
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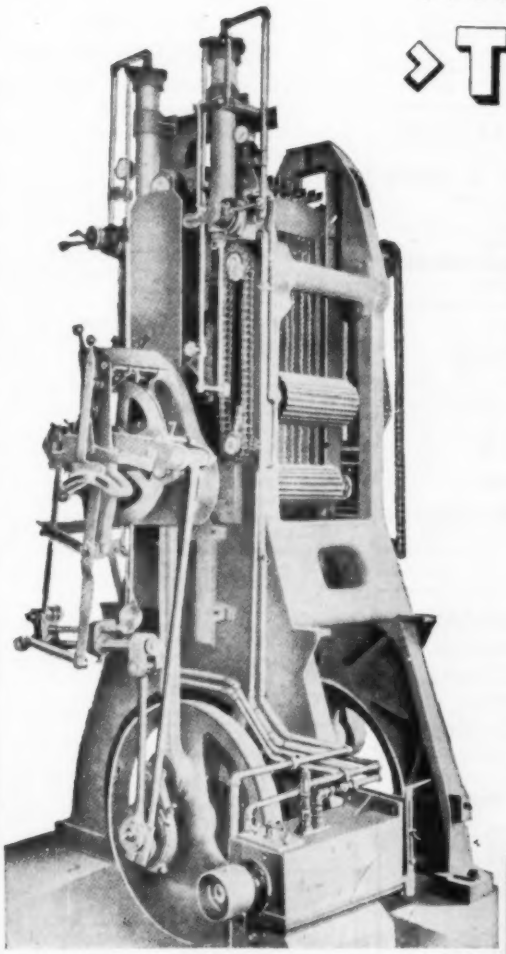

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PORTLAND Iron Wks. 6"x36" R. H. Stub Edger, late type four feed rolls. Also front and back roll cases.
HESSE-ERSTED short wood chipper.
Roller bearing, 13"x14" opening.
SUMNER #65 Hog, roller bearing base and drive. Used only 2 wks. from new.
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OILGEAR 60 h.p.—carriage feed drive complete.
WESTERN shot gun feed 12"x42' complete w- controls. New but half price.

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BUYERS GUIDE and CLASSIFIED SECTION

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$9,100.00

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1—52" Turner Band Resaw Complete with motor and saws.
1—Covel Hanchett Bandsaw Grinder #407—up to 10" Saws. Equipped with 2 motors.
1—Bridgeport 84" Knife Grinder. Equipped with 7½ H.P. motor.
1—Practically new Acme Gummer. Equipped with motor.
1—Covel Hanchett Automatic Circular Saw Grinder #928. Equipped with motor.
1—New Circular Saw Anvil.
1—#115 Band Saw Grinder Converted to a Gang Saw Grinder.

WILDER SAW WORKS

2520 Ventura Ave., Fresno, Calif.
Day 2-1486 **Night 76545**

STAR VALUES

PLANERS - MATCHERS MOULDERS

Used #107 Woods 6" x 15" inside moulder.
New M-512 Newman 8" x 16" planer-matcher 8-knife..
New M-500 Newman 6" x 14" planer-matcher 6-knife, ball and roller bearing.
New M-48, Newman 6" x 16" planer-matcher, 4-knife ball and roller bearing.
New 8-B Newman 4" x 14" planer-matcher, 4-knife ball brg.
Used 77A American Model 5, ball brg.
6" x 15" planer-matcher, 8-knife & feed table.
Used #94 Berlin, 6" x 15" planer-matcher 6-knife.
Used #134 M Woods 4" x 10" 5-head electric moulder.

FILING ROOM EQUIPMENT

Used Hanchett 6" to 14" band saw grinder.
New G-71 Newman sidehead grinder.
New G-16 Newman sidehead grinder.
New G-232 Newman hydraulic knife grinder.
New G-132 Newman straight knife grinder.

BAND AND CIRCULAR SAW MILLS

New American #1 saw mill.

BAND RESAWS - BAND RIP SAWS

Used V-54 Yates 54" vertical band resaw, left hand, anti-friction bearings.
Rebuilt 60" Fay & Egan vertical band resaw, left hand, anti-friction bearings.
New K-52" Turner vertical single band resaw, left hand.
Used 42" Egan vertical band resaw, right hand.

SAW MILL EQUIPMENT

Rebuilt #2 PSMD (#45) log, roller brg.
New No. 135 Diamond hog.
New 4½" x 30" Miner 3-saw gang edger.
New 6" x 54" Schurman stub edger.
Used 4" x 42" edger, ball brg. arbor.

WOODWORKING MACHINES

New #890 G. M. Diehl Tapeless veneer splicer.
New #750 G. M. Diehl glue joint straightline rip-saw.
Used #32 Whitney 6" x 30" single surfacer, ball brg. DMD.
Used American 40" band saw, ball brg.
Used #600 Newman 24" x 8" single surfacer, 5 HP, ball bearing.
New S-830 Newman 30" x 8" single surfacer, 7½ HP.

COMPRESSORS, - STATIONARY

Rebuilt Model ER-1 Ingersoll-Rand 9" x 8" water-cooled, 110 CFM.
New M-40 Worthington air-cooled 158 CFM.
Rebuilt Ingersoll-Rand 7½ HP air cooled compressor, 28 CFM.

STAR MACHINERY COMPANY

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RIverside 6121

SEATTLE
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PORTLAND
801 S. W. Front Ave.
CApitol 8-7395

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LOG HAUL—385-ft. complete with 1¾" x 8" ESCO chain

LOG KICKER—12x24 steam cylinder, three 6-ft. arms

LOG STOP & LOADER—16x24 steam cylinder, 4 arm

LOG TURNER (Simonson)—two 12" x 8-ft. steam cylinder, one 60" hook arm, four 60" push arms, one 30" yoked helper—all on 7" shafting and complete lift skid setup.

CARRIAGE (Sumner)—9-ft. x 40-ft., 72" blocks, Sumner elec. setworks, 18x18 Allis twin steam feed engine, 400-ft. 1⅛" cable, 176-ft. "V" rail, 325-ft. flat rail.

HEADRIG (Allis Chalmers)—10 ft. single cut RH, extended bed, roller bearing, complete with GE 300 hp slip ring motor 580 RPM.

EDGER (Sumner)—12"x72", RB seven saw, direct connected, 300 hp Fairbanks Morse ball bearing motor 1200 RPM.

TRIMMER (Sumner)—Standard overcut, 19 saw, 40 ft. with 75 hp 1165 RPM AC motor.

GANG SAW (Diamond Iron Works)—48" vertical belted gang saw, 16" cut, 12" stroke, 37 saws set for 1-inch cut. Variable speed elec. motor connected to feed and take off. 30" drive belt connected to Allis Chalmers 250 hp 705 RPM slip ring motor with extended shaft.

RESAW NO. 1 (P.B. Yates #V-7 RB)—Vertical RH resaw, 84" diameter. 11" face wheels connected to 100 hp Allis Chalmers 865 RPM elec. motor.

RESAW NO. 2 (Prescott)—84" RB vertical single cut L.H. band resaw, 10" face wheels connected to Allis Chalmers 100 hp 865 RPM slip ring motor.

BARKERS (Stetson-Ross)—two only, 11½" x 13" automatic single head horizontal rotary slab barkers.

PONY EDGER (Sumner)—4"x21", two moveable saws.

GRINDING ROOM (Covel)—No. 150-R automatic band saw grinder.

(Covel)—No. 73 hand band saw cutting shears.

(Covel)—No. 109, 18" saw stretcher and roller with retooth attachment, with 10½x14½ anvil and one 16x20" anvil.

(Covel)—No. 110 floor type lap grinder.

(Machinery Corp. of America)—No. 11 gang saw clamp.

(Machinery Corp. of America)—No. 120, 10" automatic band saw grinder.

ELECTRIC MOTORS & REDUCTION UNITS—200 motors from 3 hp to 300 hp, gear head units, Wade, Prescott and Sumner reduction units.

All motors complete with starters, 3 phase, 60 cycle, 440 volt.

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1 hog fuel conveyor with 470 feet 24"x5 ply rubber covered conveyor belt.

10 only swing cutoff saws, 36" to 60" arms.

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One Gerlinger Carrier.

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Used 60" Band Resaw
Klamath Iron Works
Wheel 60" x 8" wide. Will take 10" width saw.
Including 4 good saws

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P.O. Box 152 Phone TU 4-3177

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Phone CA 8-1565 - CA 8-5348

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Air, oil and water hydraulic hand & foot valves
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Nopak-matic Elect poppet valves

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Winsmith reducers—Lovejoy couplings
Monarch Forge & Machine Wks.
Band Mills—carriages—trimmers—edgers

GOOD USED MACHINERY VALUES
1—25 M Air-electric sawmill
1—7A Stetson-Ross 8K-planer—factory Motorized-bottom cyl. & side hds.-top cyl. belt-hoods & starters
1—10" x 72", 6—30" saw stub edger W 200 hp motor, starter & coupling
1—4" x 42" 4 saw stub edger with 50 hp motor, starter & coupling
1—20" champion backgeared motorized floordrill

MOTORS & REDUCERS
1—200 hp, 600 R.P.M. 440 V slip ring
1—150 hp, 600 R.P.M. 440 V slip ring with starters, grid control
1—1½ hp, 58 R.P.M. 440 V wormreducers
2—1 hp, 58 R.P.M. 440 V Wormreducers
1—2 hp, 1800 R.P.M. 440 V Century
1—1 hp, 1800 R.P.M. 440 V Howell

FOR SALE

4 Saw Skrag mill—2 adjustable saws—complete and ready to run. A bargain for quick sale. Paxport Mills, 900 Milwaukee Waterway, Tacoma, Wash.

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SAW SAVERS
BETTER MANUFACTURED LUMBER
Write or phone Manufacturer

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P. O. Box 997 Klamath Falls, Ore.
TUXEDO 4-7198

BUYERS GUIDE and CLASSIFIED SECTION

FOR SALE

Heavy duty Circular Headrig, left hand can be made right hand, 1 year old—16" chipper installed. Top & bottom arbors with one spare, Endless belt included. 8-48" saws, total price—$2,500.00, Erskine Lumber Co., Swisshome, Oregone.

FOR SALE

50" NORMAN CHIPPER

50" C.M.E. Norman Chipper #505 complete with the following:
10 x 10" Spout
1—DN Hanchett 40" grinder with special attachment for grinding four knives per set up.
1—200 HP G.E. slip ring mtr. 600 RPM 3/60/2200 Type 1 form M Serial No. 1775375
1—pulley 33" PD—D sec. 12 groove
1—pulley 22.5 PD—D sec. 12 groove
12—only 195 D sec. V-belts
1—G.E. Drum controller J108C #447553
1—2500 Volt FK G.E. Oil Switch
1—440 Volt FK G.E. Oil Switch
As is, where is—fob. Foster, Oregon---$13,500.00

YARDER

1—Washington 3-drum yarder—size 175—with Hercules Motor and twin disc clutch. Gearing and spools in good condition f.o.b. Foster, Oregon-----$1,000.00

CARRIERS

4—4MHS Gerlinger Carriers
1—1947 ----------$750.00
2—1948 ----------$800.00 Ea.
1—1949 ----------$850.00

50" NORMAN CHIPPER

Include 1—50" Norman chipper #503 with 10 x 10 spouts, direct connected and complete with the following:

1—Louis Allis Motor, type OGK, frame No. 137, Class 4B, Form G. 150 HP 810 RPM 2200 Volt 3 phase, 60 cycle, 42 amps.
1 Allen Bradley Automatic compensator
1 DN Hanchett Knife grinder 40" with a special attachment for grinding four knives per set up.

Priced at $13,500.00 f.o.b. Dallas, Oregon
Available July, 1956.

ALL PRICES ARE NET TO US, SUBJECT TO PRIOR SALE AND INSPECTION—F.O.B. DALLAS.

For Further Information, Write, Call TWX 80, or Phone Mayfair 3-2351, Purchasing Department

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Knight Mfg. Co.—Carriage—3 Blocks 20-36' Long. Friction drive—100' Track Drive 25 H.P. Ball bearing Motor. Price $2,000.00

Berlin Mach. #302—64" L.H. Band Mill—uses 8'-9" saws. Drive Belt 50 H.P. Motor 900 R.P.M. Price $2,000.00

Amer. Mach. #1 Boss 30"x16" timber sizer—Drive 35 H.P. Motor. Feed—25 H.P. Motor Top head 25 H.P. Motor Bottom head—all Belt drive. Price $3,500.00

Greelee #427 self feed Rip saw size—44"x68½"—Drive Belt—20 H.P. Motor. Price.....$750.00

Berlin Mach. #91—15x6 Planer and Matcher. Drive Belt .75 H.P. Motor 600 R.P.M. Price $3,500.00

Baxter Whitney—30" double surfacer—Round heads—sec. corrugated feed rolls Drive V Belt low head 25 H.P. Motor Top head—Direct Com. 25 H.P. Motor. Price $1,800.00

Berlin Mach. #341—54" Band resaw—L.H. Drive Belt—50 H.P. Motor 900 R.P.M. Price..$2,000.00

Hermance—12" sticker. Drive Direct — 25 H.P. Motor. Price $800.00

Berlin Mach. #137 Circular Saw Grinder—3 H.P. Motor. Price $75.00

Oliver Mach. Knife Grinder—1 H.P. Motor. Price $100.00

Hanchett #207 Band saw grinder—3 H.P. Motor. Price $200.00

Hanchett 10" saw Roller and stretcher—2 H.P. Motor V Belt. Price $300.00

Garden City Fan 60" Drive Belt 25 H.P. Motor. Price $950.00

Bayley Mfg. Fan 50" Drive Belt—15 H.P. Motor. Price $900.00

Garden City Fan 35" Drive Belt—10 H.P. Motor. Price $800.00

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All Motors 3 Ph.—60 cy.—440 Volts—Mounted on Rockwood bases, with starters.

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BUYERS GUIDE and CLASSIFIED SECTION

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1 used 137-M Woods electric 6" moulder, with 1 set each of 2 round and 4 square heads and hoods. This machine purchased used by us from large piano company having constant maintenance contracts on it. We desire to sell without having ever installed it, due to change in plans. Price: $6,500.00.

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500 hp. water tube PSMD boiler and stack. 200 lb. pressure.

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One complete almost new automatic stacker at a used price for stacking lumber 8 feet long to 16 feet long, manufactured by Moore Dry Kiln Company. Will pay for itself in savings of manpower. Complete specifications can be had by writing to

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Used 4" x 32" Wheland 3 Saw BB Table Edger
Used 4 x 36 Newport BB Table Edger
Used 10 x 60 Allis LH roller brg. Stub Edger
Used 4 x 42 BB Newport Stub Edger
Used 6 x 48 Fabricated Stub Edger
Used Burton 6 x 42 4 gang Stub Edger
Used 12 x 84 Sumner Edger
Used Heaps 6 x 30 Stub Edger
Used 4" x 32" American 3 saw Stub Edger
Used 3" x 32" Tower 2 saw Table Edger
Used 4" x 30 Enterprise 3 saw Table Edger

HOGS AND CHIPPERS

New Diamond #25 Hog
New Diamond #135 Hog
New Diamond #145 Hog
New Diamond #135 Chipmill
New Diamond #145 Chipmill
Used #40 Diamond Hog
Used #45 Diamond Hog
Used #60 Diamond Hog
Used 36" Hansel Chipper
Used Williams Hammer Hog 20 x 44 opening
Used #35 Diamond Hog
Used 64" Hesse Ersted Chipper
Used 52" Hesse Ersted Chipper
Used #35 Puget Sound Hog

PLANERS—MOULDERS—SURFACERS

Used #100 Heaps 5" x 15" BB Pony Planer—Like New
2" x 4" Eaglesfield electric moulder—frequency changer
Stetson Ross #4 16 x 30 Timber Sizer
Used Berlin #95 6 x 30 6-knife matcher with ripper
Newman #99 6 x 15 6-knife planer-matcher
Used Frank 5 x 24 planer
New 4 x 13 BB Marathon planer-matcher
Used American #77 8-knife BB Planer
Used Tilting Lumber Hoist, floor chains
Used Sawoods Planer Feed Table
New Durant Lumber Meters

RESAWS AND RIP SAWS

Used No. 'O' American Self feed rip saw
Used 54" McDonough BB Resaw
Used 54" Mershon, anti-friction brg, tilt rolls
Used J A Fay & Egan 42" Band rip saw
Used 42" Cordesman Band Resaw
American #2 Self-feed circular rip saw
Used 40" #4 Band scroll resaw
Used Mershon 54" Resaw, sawmill type, quick set
Used 54" Berlin resaw, screw set
Used #2 Faye & Egan 36" BB Circular Resaw
Used 38" Trojan circular resaw BB—17" x 14" capacity

HEAD RIGS AND CARRIAGES

Monarch 3 block carriage
New Wheland #36 Portable Mill
New Wheland 7' Band Mill RH, takes 14" Blades
Corinth Hydraulic Sawmill, riderless carriage
Portland Iron Works 60" opening headblocks
#4 Trout Set Works for screw block
54" Berlin Pony Band Mill, 7" Blades
Sumner Power Set Works for screw block
Sumner Iron Works 3-block R & P 36" opening tapers
54" Opening screw type headblocks
3 Sumner 72" opening headblocks
Used 8' Wheland LH Band mill—anti-friction
Used 6' Union Iron Works band mill
9' Union Band Mill, roller bearing, RH
6' Yates Band Mill, all cast, LH

MILL EQUIPMENT

New Wheland 1 man 2-saw Trimmer, electronically controlled
Used 2-arm log Stop & Loader, 36" arm, 12x16 cyl.
Used 3-arm log Stop & Loader, 42" arm, 16x20 cyl.
Used 20' Portland Iron Log Turner
4—Used Gerlinger Carriers 42"
New Willamette Iron Works Swede-rubber rolls
Steel Deck with Flippers

MOTORS

Used—75 HP—1800 RPM SB
Used—200 HP—720 RPM Slip ring with controls
New 150 HP 900 RPM Allis-Chalmers BB
New 150 HP 1200 RPM BB Allis-Chalmers
New 100 HP 1200 RPM BB Allis-Chalmers
Used 75 HP 1200 RPM SB GE
Used 25 KVA Westinghouse w/controls
New 750 Watt gas driven Generator
Sawmill type gearmotors and reducers 3 to 10 HP
Large stock of used motors, large and small

FEED WORKS

Monarch Friction Feed
Wheland 5" Belt Feed
New 5 x 6 SpeeDee Twin Feed
16 x 18 Allis Steam Twin feed self-contained
American 6 x 12 dbl. cpl. single drum feed
Used #166—Salem Feed 16" x 6" drums

LOG AND CANT GANGS

Marathon #200 Gang saw, 13 x 20, for Cants
Marathon #120 Gang saw, for Logs or Cants
Used 8 x 32 Wickes Cant Gang
Used 20 x 20 Gang
Linck Gangsaw for logs or cants, 22 x 22—In stock
Linck Gang saw for logs or cants, 8 x 28—in stock

FILING ROOM EQUIPMENT

New Armstrong #4 Stretcher Roll
New Marathon Gang Saw Grinder
New Armstrong #54 Circular Saw Gummer
Used Armstrong #6 Band Saw Grinder
Used Covel #140 Automatic Band Saw Grinder
Used Covel #217 RH Band Saw Grinder
Used Covel #90 LH Band Saw Grinder
Used Covel #83 24" Gang Saw Grinder
Used Covel #150 RH Band Saw Grinder
Used Hanchett #724 36" Automatic Circular Saw Grinder
Used Hanchett #948 Circular Saw Grinder
Used Hanchett #250 LH Band Saw Grinder, motorized
New and Used Levelling Blocks
Used Covel #109 Stretcher Roll 16" capacity

KNIFE GRINDERS

Used S. A. Woods motorized sidehead grinder
Used Buffalo 28" cup wheel knife grinder
Used 36" Fay & Egan #253 automatic knife grinder
Used American 30" knife grinder
Used American 32" straight wheel knife grinder
Used Covel GK 38" late type knife grinder
Used BT&B 39" Automatic straight wheel hog knife grinder
Used S. A. Woods sidehead and profile jointer stand
New Dependable #99A5 36" motor drive, automatic knife grinder
New Dependable #101A sidehead Grinder
New Defiance 38" motorized automatic knife grinder
New Andrus abrasive belt 32" automatic knife grinder
Used Dependable 36" automatic knife grinder

ENGINES AND BOILERS

Caterpillar Diesel Engine D8800
Caterpillar Diesel Engine D13000
New 20 HP Diesel Engine FM
11 x 12 Ames Center Crank 48 x 12 Pulley
62" x 20' 100 HP Code Boiler 195#
54" x 14" HRT ideal for dry kiln
72" x 18" 160 HP Code Boiler 150#

NEW AND USED PUMPS

Underwriter approved Firepumps—many sizes
Log Wash units complete with Spray Ring
New 150 Boiler Feed Turbine Pump
New 3x2x3 Worthington Duplex Boiler Feed
Used 12x6x12 Advance Duplex Boiler Feed
Used 6x4x6 Worthington Duplex Boiler Feed
Used Worthington 4" centrifugal—1000 GPM

COMPRESSORS

50 cu ft Used Worthington air cooled
65 cu ft Used Worthington air cooled
65 cu ft New Worthington air cooled
142 cu ft Used Worthington air cooled
160 cu ft Used Ingersoll Rand Portable
230 cu ft Ingersoll Rand Portable
311 cu ft Used Ingersoll Rand water cooled
324 cu ft Used Ingersoll Rand water cooled
355 cu ft Used Ingersoll Rand water cooled
500 cu ft Used Worthington air cooled

HOIST AND CRANES

Used 5 ton Hesse Ersted Single drum hoist—like new
New 10 ton Schurman dbl drum hoist
New 5 ton General Utility Beebe Brs. hoist
New Budget Hoists in stock
Used American dbl. drum 24x24 40 HP

SHOP TOOLS

20x12 Shoemaker QC lathe
Used Oster Pipe & Bolt Threader
3' Mueller Radial Drill
4' American Geared Head Radial Drill
8x16 Racine Hydraulic buck saw
#3 Kempsmith Geared Maximiller

MISCELLANEOUS

American Columbia 48" oscillating 3 drum sander
Used Hesse-Ersted 6 HP motorized saw arbor
Used Irvington 60" arm swing saw
Berlin 39" 3 drum sander
Used Morgan Box board matcher
Mereen Johnson box board squeezer
Mereen Johnson 20' precision trim & printer
36" Crescent ball bearing band saw

Agents for LUMBER DRYALATORS, INC.—High Speed Dry Kilns. DIAMOND IRON WORKS—Fuel Hogs and Chipmills. SCHURMAN MACHINE WORKS—Edgers, Hoist. BERRY MFG. — Hydraulic Carriage Drives. WORTHINGTON CORPORATION — compressors and pumps. WHELAND COMPANY—Band Mills, Circular Sawmills, Edgers, Trimmers, Carriages. IRVINGTON—Trim Saws. ARMSTRONG MFG.—Filing Room Equipment. DEPENDABLE—Knife Grinding Equipment and Moulders. ALLIS-CHALMERS MFG.—Motors, Controls, Drives. COMET—Radial Arm Saws. DAVIS & WELLS—Woodworking Machinery. BEGE Hydraulic Log Turners. P&H—Hoist. BINKS MFG.—Spray Equipment. MARATHON AND LINCK GANG MILLS.

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Men & Machines

Gyppo logger, sawmill "super" or even chairman of the board—you'll find here each month a round-up of news tips and hints from all corners of the machinery world.

• Two more forest industries sound and color 16 mm. films are available for free showings. Hyster Co. (2902 N.E. Clackamas, Portland 8, Ore.) has a 43-minute film called "Operation Profit" showing the most modern methods for handling lumber. Views include wrapped and strapped bundles of lumber being handled from flatcar shipments. Washington Iron Works (1500 6th St., Seattle 4, Wash., attn: H. Burton) has just produced an 8-minute movie of the Trakloader loading from right-of-way, traveling and yarding and loading in a Douglas fir region logging show.

• Murphy-Campbell Co., Caterpillar dealers for Tacoma and surrounding territory, are going "all-out" in their efforts to give customers faster service on parts and repairs. They have installed two-way radios in all company pickups and salesmen's cars and at company offices in Tacoma. Whenever a field man has to order parts, he just radios in, instead of making time-consuming trip into town to telephone.

• A well known westerner, Z. C. R. Hansen, formerly manager of Automotive Equipment Co., Portland, has been named president of the Diamond-T Motor Car Co., Chicago. Hansen's promotion to the presidency of the Diamond-T truck organization comes only a few years after he moved from Portland to Chicago to direct Diamond-T sales.

• New in the Pacific northwest woods is the LeTourneau-Westinghouse Model CA logging arch with Model T Tournapull, shown here in operation in the Nanaimo Lakes country of Vancouver Island, B. C. This four-wheel machine, powered by a GM 6-cylinder 260 hp. diesel, is arousing considerable interest in the NW. It can haul loads to 4M feet up 12% adverse grades.

• William S. Richardson, president of B. F. Goodrich, is the new chairman of the National Highway Users Conference, succeeding Albert Bradley, GMC board chairman. (See item this issue for Mr. Richardson's views on present business and on today's tires.—Ed.)

WILLIAM S. RICHARDSON

Rubber company executive says new "wire tire" will be just the thing for log hauling.

Goodrich President Foresees Excellent 3rd, 4th Quarters

• "Business in the United States will be good for some time to come," said William S. Richardson, president of the B. E. Goodrich Co., in Seattle recently. "Business," he said, "will be better during the second half of the year than during the first half." One of the reasons given by Mr. Richardson for the great prosperity now prevailing is that industry itself is this year spending some $35,000,000,000 on capital expenditures. This shows industry's faith in the future.

Mr. Richardson announced that the B. F. Goodrich Co. is bringing out a wire tire. The company is just getting into production on this new tire. The tire, Mr. Richardson said, will be ideal for log hauling service.

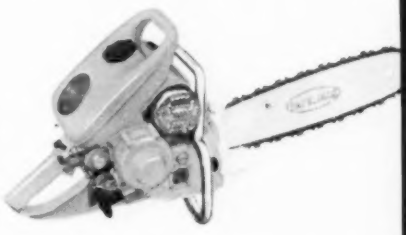
In a talk before the Seattle Sales and Advertising Club, Mr. Richardson said research in marketing has not kept pace with research in manufacturing. He said more research must be made in communications, selling and distribution. "There is a challenge," he said, "to develop distribution machinery that will turn out customers as fast as our production machinery turns out products. If we are to consume the continuous-flow output of our new streams of production, we will need new continuous-flow methods of marketing.

GRAND OPENIG OF NEW NORTON Co. grinding wheel plant at Santa Clara, Calif., attracted key company sales and executive personnel. Announced in THE LUMBERMAN (May, p. 150), it is Norton's first such plant outside Worcester, Mass. In left inset, Exec. V. P. RALPH F. GOW, Plant Manager GEORGE A. GARRISON and Pres. MILTON P. HIGGINS watch operation of one of the new machines. (Middle) HARRY G. BRUSTLIN, Pacific coast district manager, and RALPH M. JOHNSON, vice pres. for sales. (Right) JOHN JEPPSON, vice pres., manufacturing, and DON L. PRICE, sales manager for grinding wheels, discuss one of new wheels made here.

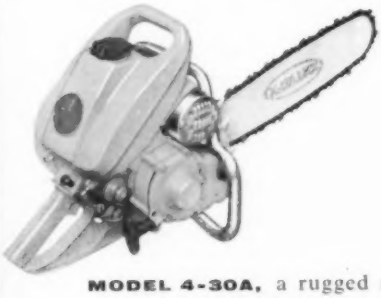
Only McCulloch offers complete choice of size, power, weight, and price, *plus* first-class service through a nation-wide chain of factory-authorized dealers

MODEL 33B, lightest in weight (20 lb complete), lowest in price. Blades available up to 26 inches.

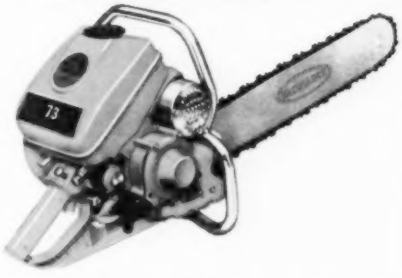
SUPER 33, fastest cutting of all saws in its weight and price class. Packed with power and speed. Blades up to 26 inches.



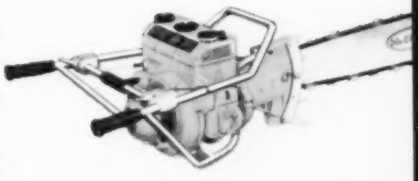
MODEL 47, a dependable and durable saw for pulp or medium-sized timber. Blades up to 42 inches long.



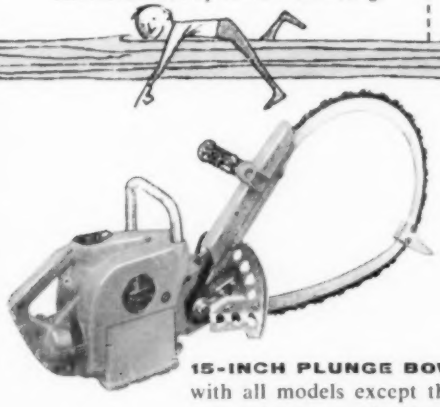
MODEL 4-30A, a rugged saw for production cutting in any size timber. Blades up to 42 inches long.



MODEL 73, fastest cutting of all one-man saws. For high production in any size of timber. Blades up to 42 inches.



MODEL 99, largest, most powerful saw in the McCulloch line. Blades up to 60 inches, plus 20-inch bow.



15-INCH PLUNGE BOWS are available with all models except the 99. McCulloch plunge bows cut with the tip, save time and labor felling and bucking pulp and cordwood.

McCULLOCH

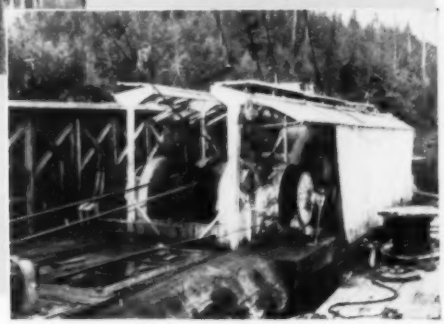
World's largest chain saw builder

McCulloch Motors Corporation,
Los Angeles 45, California

5-5005-B

FLOATING SKIDDER at Neets Bay. Galvanized wire rope was used to lash the float of logs, which are 5 feet or more at large end.

(Below) Yellow Strand delivers skyline carriage from water's edge to a point 2500 feet uphill in 90 seconds or less.



Yellow Strand

helps produce "Green Gold" at Ketchikan

For years loggers have dreamed of tapping the giant forest reserves of Alaska. Poor transportation, inadequate supply depots, either rocky ground or very soft ground, and extremely damp weather have always kept them out.

Now, the Ketchikan Pulp Co. has produced a "green gold rush" in Alaska, with the beginning of logging operations at Hollis Camp and Neets Bay, 35 airmiles north of Ketchikan. Yellow Strand Wire Rope is helping in the extremely tough job of getting logs out of the woods.

Experience of loggers proves the built-in qualities and long life of Yellow Strand Wire Rope. It is giving better service because it's manufactured to the highest standards of precision. See your Broderick & Bascom Distributor for more facts about Yellow Strand Wire Rope.

Yellow Strand®

Manufacturers of Wire Rope for 80 Years

Broderick & Bascom Rope Co.

655 Edmunds St., Seattle 8, Wash.

American Logging Tool Corporation is a subsidiary of Broderick & Bascom Rope Co.